

S VII MEĐUNARODNI NAUČNI SKUP *Specijalna edukacija i rehabilitacija*

S THE 7TH INTERNATIONAL SCIENTIFIC CONFERENCE
Special education and rehabilitation
TODAY

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**KNJIGA REZIMEA
BOOK OF ABSTRACTS**

UNIVERZITET U BEOGRADU - FAKULTET ZA SPECIJALNU EDUKACIJU I REHABILITACIJU
UNIVERSITY OF BELGRADE - FACULTY OF SPECIAL EDUCATION AND REHABILITATION

BEOGRAD
BELGRADE **2013**

UNIVERZITET U BEOGRADU
FAKULTET ZA SPECIJALNU EDUKACIJU I REHABILITACIJU
UNIVERSITY OF BELGRADE
FACULTY OF SPECIAL EDUCATION AND REHABILITATION

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**Zbornik rezimea
Abstract Book**

VII međunarodni naučni skup
The Seventh International Scientific Conference
Beograd, 27–29. septembar 2013.
Belgrade, September, 27–29, 2013

Beograd, 2013
Belgrade, 2013

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Izdavač / Publisher:

Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju
University of Belgrade – Faculty of Special Education and Rehabilitation
11000 Beograd, Visokog Stevana 2
www.fasper.bg.ac.rs

Glavni i odgovorni urednik / Editor-in-chief:
prof. dr Mile Vuković

Za izdavača / for Publisher:
prof. dr Jasmina Kovačević, dekan

Dizajn korica / Cover design:
mr Boris Petrović, Zoran Jovanković

Obrada teksta / Word processing
Biljana Krasić

Štampa / Printing: „Planeta print”, Beograd

Tiraž / Circulation:
250

ISBN 978-86-6203-032-0

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Plenární deo

Plenary session

Effective preparation for urban special education school leaders: A shared vision

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A shared vision that addresses the critical need for highly qualified doctoral level urban school district special education administrators is presented. The project presented is the story of a collaborative effort among the Orange County Public Schools (OCPS, 10th largest school district in country), Miami Dade Public School (MDPS, 4th largest school district in the country) and the University of Central Florida (the 2nd largest university in the country in order to provide highly qualified special education leaders for urban school districts. The session will translate to the audience by sharing of the logic model used in the project. The project provides three major outcomes/products: creation of an Education Doctorate (Ed.D.) degree with a specialization in Special Education Leadership for urban special education administrators; the creation of a cadre of experts in special education urban leadership to act as a National Faculty; and, twelve (12) urban special education administration fellows with educational doctorate degrees. Details of the project will be presented.

*Keywords: school, special education leadership,
special education administration*

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Russia on the path to affordable and quality education for all

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The scientific community and practitioners are faced with an acute problem not only with the definitions of inclusive education as a significant interdisciplinary concept and the identification of its role in the implementation of the humanistic paradigm, but also with the improvement of the legislative, regulatory and methodological framework. Inclusive education today, most likely, means finding effective ways of teaching different groups of children (children with special educational needs, children with disabilities, gifted children, children with conditional regulatory development) in order to meet individual needs, development of skills, the formation of social and professionally relevant competencies. Inclusive education in Russia, in particular in Moscow as an innovative region, has a legislative base, which directly or indirectly indicates the right of every person to receive a quality education, as an essential condition for effective socialisation. However, despite the existence of legislation and the declared government support, the transition to inclusive education is being implemented gradually, provided the preservation of the system of special (correctional) education at all levels of general education. The principle of freedom of choice of education according to the needs and inclinations of man (the „Law on Education of the Russian Federation”, 2012) gives the right to a child with disabilities to attend

educational institution, as well as the right to attend a special (correctional) institution. However, inclusive education will be attractive to families with children with developmental disabilities only if they meet the requirements of accessibility, quality and professionalism.

*Keywords: inclusive education, children with
developmental disabilities, learning,
social integration*

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Interdisciplinary approach to diagnosis and correction of developmental disabilities in early intervention

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In recent years, a negative trend in the state of children's health in the Russian Federation is still present. According to official statistics, the child population has been steadily declining, and the prevalence and incidence of diseases among children is increasing annually by 4.5%. The number of newborns with health problems is: physiological immaturity – 74%, children with neurological disorders – up to 86%. Not more than 10% of preschool children and 4% of adolescents are considered completely healthy. Currently, the early diagnosis of developmental disabilities in children is rapidly coming into practice. In Russia, there are more than 500 centres for early intervention, more than 80 of them in Moscow. These new forms of pre-school educational institutions (such as early intervention services, „lekotek's", groups for a short-term stay) offer corrective and developmental educational assistance to children with developmental disabilities and to their parents. Main focus of Early Intervention Preschool Services is a comprehensive multidisciplinary approach to education, socialisation and rehabilitation of children with disabilities. It is essential to unite the efforts of all professionals (doctors, special education teachers, psychologists, social workers) and direct them to the development of family's own potentials, instead of substituting it. Early care involves a wide range of long-term-oriented services to the entire family

of a child with developmental disabilities and is implemented through close cooperation of the team of specialists from various fields.

Keywords: developmental disorders, early diagnosis, multidisciplinary approach

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Rana intervencija – iskustva iz Hrvatske

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Spoznaje moderne medicinske znanosti otkrivaju nam da je djetetov mozak „neuroplastičan” odnosno da se tijekom prve dvije godine života djeteta pravilnim stimulacijama iz okoline može značajno utjecati na kvalitetu razvoja i funkcioniranja mozga, a time i na cjelokupni razvoj djeteta.

Rizične i održavane trudnoće, prerano rođenje djeteta, različita nepovoljna stanja tijekom i neposredno nakon poroda, rizici su koji često uzrokuju razvojne teškoće u djeteta, a najčešće su teškoće u području komunikacije, jezika i govora. Danas se u Hrvatskoj prosječno godišnje rađa 10% djece s neurorizičnim čimbenicima. Upravo ova djeca kandidati su za korištenje usluga rane intervencije.

Cilj je ovog istraživanja ispitati u kojoj dobi neurorizična djeca na području grada Zagreba i Zagrebačke županije „ulaze” u programe rane intervencije, tko ih upućuje na navedene programe i s kojim „ulaznim dijagnozama” te je li došlo do pozitivnog pomaka s obzirom na kronološku dob kada je dijete prvi puta upućeno na obradu između 2010. i 2013. godine.

Obradili smo podatke 110 djece koja su u periodu od 2010. do 2013. godine upućena na program rane intervencije u Udrugu „LERI” – Udruga za logopedsku i edukacijsko-rehabilitacijsku ranu intervenciju. Podatci pokazuju da postoji značajni pomak prema

nižoj dobi upućivane djece između 2010. i 2013. godine, da značajno više roditelja dolazi samoinicijativno, ali i značajno veći broj pedijataru upućuje djecu na (ne)medicinsku obradu, ali da je još uvijek negovorenje glavni razlog upućivanja djeteta u programe rane intervencije.

Ključne riječi: rana intervencija, neurorizični čimbenici rizika, komunikacija, jezik i govor

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Early intervention – experiences from Croatia

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Knowledge of modern medical science reveals that a child's brain is „neuroplastic” and that during the first two years of a child's life the environment can significantly affect the quality of brain development and functioning as well as the child's development.

Risk and maintained pregnancy, premature birth, and various unfavorable conditions during labor and immediately after birth represent risks that often cause developmental problems in children. The most common problems are in the field of communication, language and speech. Research shows that 10% of children annually born in Croatia are born with neurological risk factors. These children are candidates for using the programs of early childhood intervention services.

The aim of this study was to examine at what age children with neurological risk factors in Zagreb and Zagreb County are included in early intervention programs, who introduces them to these programs, what their „entry diagnoses” are and whether there has been a positive change, regarding the chronological age at which the child was first referred for treatment between 2010 and 2013.

We have processed data from 110 children who were referred to an early intervention program in the

Association „LERI” – Association for speech therapy and education-rehabilitation early intervention, in the period between 2010 and 2013. The data shows that there is a significant shift towards lower age of referred children and that much more parents came on their own initiative. However, a significantly greater number of pediatricians referred children to nonmedical treatment. Delayed speech and language development is still the main reason for referring children to an early intervention program.

Keywords: early intervention, neurodevelopmental risk factors, communication speech and language

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The role of accessibility centers for students with disability in higher education: the case of the University of Thessaly

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A growing number of students with disabilities attend institutions of higher education. At the same time, research highlights that students with disability face many obstacles regarding their academic access. For this, disability or accessibility centers operate in some institutions in order to respond to the needs of students with disability. In Greece, universities are not required by law to provide support services to students with disabilities, but recently a few universities took the initiative to establish accessibility centers.

The aim of the current presentation is to describe the role of the Accessibility Centre at the University of Thessaly (ACUT), a university with approximately 12000 students located in the centre of Greece. The ACUT started to operate in 2010 and its aim is to enhance the physical, academic and social access of students with disability. In essence, the ultimate target of ACUT is to maximize the potential of students with disability through the following actions: a. assess students' needs, b. inform the faculty staff regarding the needs of the enrolled students with disability, c. support the academic staff to differentiate instruction according to their students' needs, d. support students with disability through peer-tutoring programs, and e. make adjustments which aim to facilitate the physical access of students with disability.

During the three years of operation ACUT has provided its services to 40 students with disability. The ongoing assessment of ACUT indicates its beneficial role for students with disability. At the same time, there is an issue of concern related to the hesitance of students with disability and faculty members to approach ACUT in order to ask for information or support.

Key words: students with disability, higher education, access, inclusion

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Rana intervencija u specijalnoj edukaciji i rehabilitaciji
Early intervention in special education and rehabilitation

The system of early childhood intervention in Slovenia

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The aim of this research was to establish whether the implementation of early intervention legislation is uniform throughout the national territory. The research involved all 9 regional units of the National Education Institute of the Republic of Slovenia, together with the corresponding Commissions for Placement of Children with Special Needs. The research included all pre-school children (1121) between 2008 and 2012, placed either in the program with the adapted curriculum and additional professional support (regular classes) or the adapted program for pre-school children in special class units. There were 904 children in regular classes and 217 children in special class units. We tried to determine whether gender proportion is equally distributed in all regional units and if there is a significant difference according to the two pre-school programs. For this purpose a Z-test with a 5% risk in hypothesis testing was used. It was determined that gender proportion is similar in all regional units; thus, the structural difference is not statistically significant ($Z=0,97$; critical value for the appropriate number of degrees of freedom is $Z_{0,05}(1000)=1,96$). The proportion of children placed in regular classes and special class units, however, is statistically significant; $Z=2,96$ with $Z_{0,05}(1000)=1,96$. Similarly, the difference in gender proportion in the entire sample is statistically significant; $Z=15,11$

with $Z_{0,05}(1000)=1,96$. That is, the proportion of males is higher than that of females. In both programs the representation of children by gender is more or less even across the national territory (two-thirds of male children and one-third of female children). With the results obtained, the research confirmed that the procedure of implementing early intervention legislation is uniform throughout the Slovene national territory.

Key words: early childhood intervention, placement, special needs

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Provision of amplification for infants and young children

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Implementation of universal newborn hearing screening programs have improved early diagnosis of hearing loss in infants and enabled provision of amplification in the first few weeks of life. There is compelling evidence that diagnosis of hearing loss and intervention by 6 months of age will significantly improve language development than their later identified peers. The degree, configuration and type of hearing loss must be taken into account when selecting the model, style and features of the hearing aid. Fitting of hearing aids should be based on pediatric prescriptive formula, Desired Sensation Level (DSL v5.0) method or National Acoustics Laboratory (NAL-NL1) method. Both methods prescribe gain for wide dynamic range compression (WDRC) signal processing, which is now commonly used with infants and young children to provide more gain at low inputs and less gain at high inputs, ensuring audibility of soft speech and comfort for loud sounds. Hearing aid settings should be verified by real-ear measurements (REMs) to ensure appropriate gain across frequencies, which would provide the audibility of speech at multiple input levels. Evaluation of amplification, by applying age appropriate tests to obtain aided thresholds and/or speech data, is an integral part of provision of amplification to assess functional benefit of hearing aids to a child. Assessment of a child's hearing,

selection, verification, and evaluation of hearing aids are critical components of any pediatric amplification protocol, which should be followed to provide optimum access to sound. Appropriate amplification would provide a child with the opportunity to develop normal speech, language, cognitive, emotional and social skills.

Keywords: Hearing assessment, Hearing aids, Selection, Verification, Desired Sensation Level (DSL v5.0) method, National Acoustics Laboratory (NAL-NL1) method, Real-ear measurements (REMs), Evaluation

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Metode rada edukacijskih rehabilitatora u ranoj intervenciji specijalne bolnice za zaštitu djece s neurorazvojnim i motoričkim smetnjama

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Unutar Specijalne bolnice za zaštitu djece s neuro-razvojnim i motoričkim smetnjama djeluju multi-disciplinarni timovi stručnjaka, koji u suradnji s roditeljima djece s razvojnim teškoćama primjenjuju načela rane intervencije. Djeca od rođenja do punoljetnosti praćena su od strane liječnika fizijatra (kao nositelja tima), neuropedijatra, edukacijskog rehabilitatora, fizioterapeuta, logopeda, psihologa, radnog terapeuta, senzorno integracijskog terapeuta, i specijalista rane intervencije. U suradnji s članovima obitelji provodi se individualizirani program za poticanje razvoja djeteta, pri čemu edukacijski rehabilitatori i specijalist rane intervencije stavljaju posebnu pažnju na interakciju i komunikaciju s djetetom te oblikovanje okoline poticajne za njegovo učenje. Naš tim stručnjaka, trudi se pratiti trendove novih metoda u habilitaciji, a nakon edukacija i primjene istih, primjetna su znatna poboljšanja u svim segmentima razvoja.

Ključne reči: rana intervencija, neurorazvojne i motoričke smetnje, multidisciplinarni tim stručnjaka

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Methods used by special educators in early intervention in the special hospital for children with developmental and motor disabilities

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A multi-disciplinary team of experts operates within the Special Hospital for Children with Developmental and Motor Disabilities. In collaboration with parents of children with neuro-developmental disabilities, they apply the principles of Early Childhood Intervention. Children are monitored from birth to adulthood by physicians (team leader), neuropediatricians, special educators, early intervention specialists, physical therapists, speech therapists, psychologists, occupational therapists, sensory integration therapists and specialists in Early Childhood Intervention. In collaboration with family members, an individualized program which encourages the child's development is carried out. Educational rehabilitation specialists and specialists in Early Childhood Intervention put special emphasis on interacting and communicating with the child and creating the environment stimulating for child learning. Our team of experts aims to monitor trends in new methods of habilitation, and after training and their application, improvements in all aspects of development are noticeable.

Key words: early intervention, neuro-developmental disabilities, multi-disciplinary team of experts

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Moderni aspekti specijalne edukacije i rehabilitacije dece sa teškoćama u razvoju

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U ovom radu bice prikazani inovativni pristupi u radu sa decom sa smetnjama u razvoju kao i smer-nice za dalje aktivnosti. Istraživanja i praksa potvr-đuju da su multidisciplinarni pristup u dijagnostici i tretmanu, timski rad, saradnja i podrška roditeljima značajni faktori za uspešan tretman.

Centar za specijalnu edukaciju i rehabilitaciju prime-njuje više metoda i tehnika pojedinačno ili u kombi-naciji u radu sa decom sa smetnjama u razvoju. Sen-zorna integracija (SI) je sposobnost sređivanja čulnih utisaka u cilju njihovog smislenog korišćenja. Ogrom-an broj informacija iz okoline i vlastitog tela mozak prima, organizuje i locira, obezbedjujući kretanje, percepciju, ponašanje i učenje. SI terapijskim pristu-pom se poboljšava funkcionisanje deteta u svakod-nevnom životnim aktivnostima. Flortajm (elementi) je razvojni model koji je utemeljen na odnosima i po-štovanju individualnih razlika. Cilj je stvaranje uslo-va za savlađivanje 6/9 fundamentalnih razvojnih mi-ljokaza koji čine osnovu razvoja i učenja. Zasniva se na individualno-diferencijalnom pristupu. U centru aktivnosti je odnos s drugim, prvenstveno s rodite-ljima. Tretman i edukacija dece sa autizmom i dece sa teškoćama u komunikaciji (TEACCH elementi) sasto-je se u korišćenju slika, gesta, demonstracije, u svrhu bolje komunikacije, razumevanja, izražavanja i kao sredstvo u radu.

Sve navedene metode, koje se primenjuju samostal-no ili zajedno sa drugim metodama, imaju svoje te-orijske osnove u neurofiziologiji, neuropsihologiji, razvojnoj psihologiji i defektologiji. Svaka na svoj način pomaže deci sa teškoćama u razvoju da dosti-gnu maksimum svojih sposobnosti i potencijala na putu sazrevanja i odrastanja.

Ključne reči: teškoće u razvoju, multidisciplinarni pristup, timski rad, saradnja sa roditeljima, uloga defektologa

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Modern aspects of special education and rehabilitation in children with developmental disabilities

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This paper presents innovative approaches to working with children with developmental disabilities and guidelines for further activities. Research and practice confirm that multidisciplinary approach to diagnostics and treatment, team work, cooperation with and support to parents are all significant factors for successful treatment.

The Center for Special Education and Rehabilitation applies several methods and techniques, separately or in combination, in working with children with developmental disabilities. Sensory integration (SI) is the ability to organize sensations so that they can be meaningfully used. The brain receives, organizes, and locates a huge amount of information from the environment and one's own body, thus enabling movement, perception, behavior, and learning. SI therapeutic approach improves a child's functioning in everyday life activities. Floortime (elements) is a developmental model based on the relations of and respect for individual differences. The aim is to enable mastering 6/9 fundamental developmental milestones which are the basis of development and learning. It is based on individually-differential approach. The focus is on the relationship with others, especially parents. Treatment and education of children with autism and children with communication disorders (TEACCH elements) consists of using pictures, gestures, and demonstration for the purpose of better

communication, understanding, expression, and as working tools.

All the above mentioned methods, applied separately or in combination, have their theoretical bases in neurophysiology, neuropsychology, developmental psychology, and special education and rehabilitation. Each of them, in a specific way, helps children with developmental disabilities to reach their full potential in the process of maturing and growing up.

Key words: developmental disabilities, multidisciplinary approach, team work, cooperation with parents, the role of special educators

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Tehnike procene u specijalnoj edukaciji i rehabilitaciji
Assessment in special education and rehabilitation

The awareness of academic staff regarding the needs of deaf and hard of hearing students in higher education

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A growing number of deaf and hard of hearing (d/hh) students attend institutions of higher education. In Greece, no legal regulation obliges institutions of higher education to provide specific services in order to include and enhance the access of d/hh students. As a result, institutions may provide no services or make no adjustments. Furthermore, the academic staff may be unaware and do not understand their role regarding the education of d/hh students. In this paper, we explored the awareness of academic staff regarding the needs of d/hh students in higher education. Twenty individuals participated in our study. Semi-structured interviews were used as a data collection method and the data were analyzed in a qualitative way. Two researchers read the interview transcriptions, identified meaningful concepts which were coded in categories and subcategories which in turn formulated common themes. The findings indicated that the academic staff was not aware of d/hh students' needs. The majority of the staff did not even know that amongst their students, there were d/hh individuals who attended their course until the latter disclosed their hearing loss. Most of the staff would prefer to be informed at the beginning of the semester regarding the attendance of such students. However, even if they had been informed, they were not sure how they could help d/hh students. Finally, the participants

underlined the important role of the establishment of a disability centre in each institution of higher education.

Key words: deaf and hard of hearing students, higher education, access, inclusion

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Investigating comprehension in children with visual disability through combined literacy media¹

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Children with Visual Disability (CVD) use both touch and hearing in order to have access to information. However, the number of research studies regarding reading and listening comprehension in CVD is not sufficient. Little research has been conducted on the variability of comprehension through different media such as Braille, large print, screen-reader and Braille display. The present study describes the pilot stage of a large-scale study (N=300 students) which evaluates reading and listening comprehension as well as working memory in Greek students with visual disability. The overall aim of the study is to investigate levels of effectiveness when CVD use a combined means of reading (haptic or/and aural). The sample of the pilot study consisted of six students (three blind students and three partially sighted). Standardized tests were transcribed into Braille and large print (24, 36, 48 and 72pt) and were given to these six students. In turn, the researchers, based on the obtained data, made all necessary modifications and adaptations of the tests in order to use them in the main research. The product of the main research will be to determine baseline for each participant based on which all the participants will be tested for their comprehension when listening and/or reading texts through a dual media instruction involving two senses at the same time; that is, haptic (Braille display, printed Braille, large print) and aural (screen reader). It is expected

that the results of the overall study will have direct implications in the education of CVD improving their literacy skills through combined literacy means to its maximum level.

Keywords: Reading and listening comprehension, working memory, visual disability

¹ This study constitutes a part of the project „Handedness and Braille Literacy in Individuals with Severe Visual Impairments „implemented under the “ARISTEIA” Action of the „OPERATIONAL PROGRAMME EDUCATION AND LIFE LONG LEARNING” and is co-funded by the European Social Fund (ESF) and National Resources.

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Testiranje orofacijalnih sposobnosti dece koja mucaju

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Mucanje možemo definisati i kao poremećaj govorno-motorne kontrole jer zahteva koordinaciju mišića za proticanje vazduha, glas i artikulaciju. Govorno-motorne veštine imaju važnu ulogu u započinjanju, razvoju i održavanju mucanja i deo su etiologije poremećaja. Razlike u senzomotorni funkcionisanju mogu uticati i na negovorni motorički sistem kod nekih osoba koje mucaju gde je najčešće zahvaćen oralnomotorni sistem. Dosadašnja istraživanja su pokazala da osobe koje mucaju imaju duže vreme izvođenja pokreta orofacijalnogmotoričkog sistema (Max i sur., 2003), ali i dalje nije jasno da li je to produženo vreme izvođenja orofacijalnih govornih i negovornih pokreta direktna posledica motoričkog deficita ili je posledica upotrebe kompezacijskih strategija osoba koje mucaju kako bi se izbegli ti motorički deficiti (Max i Gracco, 2006).

Cilj je ovoga rada istražiti obilježja orofacijalnih sposobnosti dece koja mucaju te utvrditi razlike između grupe dece koja mucaju i grupe dece koja ne mucaju.

U svrhu istraživanja korišćen je test MAMS (movements, articulation, mandibular and sensori awareness, Cook I sur., 2011) za procenu orofacijalnih sposobnosti. Test procenjuje četiri elementa: pokrete artikulatora, artikulaciju (sibilanti i alveolari), mandibularnu svesnosti i senzorsku svesnost.

Uzorak su činila deca koja mucaju (N=10) i deca koja ne mucaju (N=20) u dobi 9,1-13,8 godina. Rezultati dve skupine ispitanika upoređeni su ukupno i na svakom pojedinom delu testa kako bi se uporedile orofacijalne sposobnosti. Za poređenje rezultata između grupama korišćen je t-test.

Rezultati sprovedenog istraživanja su pokazali da su generalno orofacijalne sposobnosti dece koja mucaju lošije od orofacijalnih sposobnosti dece koja ne mucaju, da su ta deca lošija u izvođenju niza zadatakih pokreta orofacijalnih struktura, da su kod njih češće prisutne poteškoće u artikulaciji određenih glasova ($p=0,000$), da je kod njih prisutna lošija mandibularna ($p=0,001$) i senzorička ($p=0,019$) svesnost jer su imali više poteškoća u prepoznavanju objekta opipom na jeziku, i prepoznavanjem mesta dodira na jeziku.

Ključne reči: deca koja mucaju, orofacijalne sposobnosti, artikulacija, mandibularna i senzorička svesnost

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Testing orofacial abilities of children who stutter

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Stuttering can be defined as a disorder of speech-motor control because it requires muscle coordination of the flow of air, voice and articulation. Speech-motor skills play an important role in the initiation, development and maintenance of stuttering and are a part of the disorder etiology. Differences in sensorimotor functioning can affect the non-voice motor system in some people who stutter where the most affected is oral-motor system. Previous studies have shown that people who stutter have longer periods of orofacial motor system movements (Max et al., 2003), but it still is not clear whether this extended period of voice and non-voice orofacial movements is the result of motor deficit or it is a consequence of the use of compensation strategies in stutterers to avoid these motor deficits (Max and Gracco, 2006).

The aim of this study was to investigate the characteristics of orofacial abilities of children who stutter and to identify differences between a group of children who stutter and a group of children who do not stutter.

MAMS Test (movements, articulation, mandibular and sensory awareness, Cook et al., 2011) was used in this research to assess orofacial abilities. The test assesses four elements: articulator movements, articulation (sibilant and alveolar), mandibular consciousness and sensory awareness.

The sample consisted of children who stutter (N=10) and children who do not stutter (N=20) aged between 9.1 and 13.8. The results of the two groups were compared in total and each part of the test separately in order to compare orofacial abilities. T-test was used to compare the results of the two groups. Results of the study showed that general orofacial abilities of children who stutter are worse than orofacial abilities of children who do not stutter, that these children are worse in performing series of set movements of orofacial structures, that they more often have difficulties in articulating certain sounds ($p=0.000$), that inferior mandibular ($p=0.001$) and sensory awareness ($p=0.019$) is often present in these individuals because they had more difficulties in identifying an object by feeling it on the tongue, and recognizing the place of touch on the tongue.

Key words: children who stutter, orofacial skills, articulation, mandibular and sensory awareness

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Akustička i perceptivna analiza glasa kod predavača stranog jezika¹

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Problem istraživanja. Profesija predavača stranih jezika je jedna od vokalno najzahtevnijih profesija. Vokalni zamor odražava se na akustičke karakteristike glasa i dovodi do promene akustičkog kvaliteta tokom vokalne produkcije. Cilj ovog rada bio je da se ispita uticaj vokalnog zamora na akustičke karakteristike glasa kod profesora engleskog jezika koji rade u srednjim školama.

Metodologija. Ispitivanje je obuhvatilo 34 ispitanice starosti 19 do 49 godina. Vokalni zamor pratili smo analizom akustičkih parametara glasa, primenom kompjuterske laboratorije za glas „Kay Elemetrics“, a subjektivna procena glasa vršena je primenom Grabs skale. Kod ispitanica je analiziran glas pre početka prvog časa i posle završenog poslednjeg, šestog časa, istoga dana. Obradeni su akustički parametri signala, šuma i tremora. U obradi podataka primenjene su metode deskriptivne i analitičke statistike.

Rezultati. Rezultati dobijeni u ovom istraživanju pokazuju da se u svim testiranim parametrima perceptivna i akustička analiza glasa razlikuju. Statistički značajne razlike u prosečnim vrednostima ispitivanih parametara glasa javljaju se kao posledica vokalnog zamora ($p < 0,01$), dok starost i pu-

šački status nisu imali značajan uticaj na akustičke karakteristike glasa u ovom istraživanju ($p > 0,05$).

Zaključak. Rezultati ovog istraživanja govore u prilog postojanju uzročno-posledične veze između vokalnog zamora i kvaliteta glasa kod vokalnih profesionalaca.

Ključne reči: glas, analiza glasa, vokalni zamor

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1 Rad je proistekao iz projekta "Evaluacija tretmana stečenih poremećaja govora i jezika" br. 179068 (2011-2014) čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

Acoustic and perceptual voice analysis in foreign language teachers¹

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Conclusion. The results of the study indicate the existence of a causal relationship between vocal tiredness and voice quality in vocal professionals.

Key words: voice; voice analysis; vocal tiredness

Background. A foreign language teacher's occupation is one of the most vocal demanding professions. Vocal tiredness affects acoustic characteristics of voice and leads to the change in acoustic quality during vocal production. The aim of this study was to examine the influence of vocal tiredness on voice acoustic characteristics of school teachers.

Methods. The study included 34 female foreign language teachers from 19 to 49 years of age. Vocal tiredness was evaluated by analyzing acoustic parameters of voice, using the computerized laboratory „Kay Elemetrics”. The voices were recorded before the first class at the beginning of a working day and after the last class at the end of a working week. Signal, noise and tremor parameters were processed. The methods of descriptive and analytical statistics were applied in data analysis.

Results. The obtained results showed statistically significant differences in average values of parameters as a consequence of vocal tiredness ($p < 0.01$), while gender, age and being a smoker or a non-smoker did not have a significant effect on the acoustic characteristics of voice in this group of examinees ($p > 0.05$).

¹ This paper results from the project „Evaluating the treatment of acquired speech-language disabilities” nr. 179068 (2011-2014), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia

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Expressive abilities in children with Down syndrome and children with Williams syndrome

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Down syndrome (hereafter referred to as DS) is the most common chromosomopathy with the incidence of 1: 600. Williams syndrome (hereafter WS) is a rare neurodevelopmental disorder with the incidence of 1:20000-25000. Persons with these disorders have a comparable cognitive deficit, but different language abilities.

The goal of this research was to examine and compare narrative abilities of children with DS and children with WS. The assumption was that children with WS would exhibit highernarrative abilities than children with DS, but lower than children with regular language development.

The research was carried out on a sample of 40 children with DS, 5 children with WS and 40 children with regular language development. The children were equalized based on the level of their receptive language.

For the assessment of receptive language, Peabody Picture Vocabulary Test (PPVT-III-HR) was used. Expressive abilities were tested using tasks for narration assessment (according to Macmillan education) and a questionnaire for mothers (designed for the purpose of this investigation), which contains a description of expected verbal abilities in children's language. All children were

tested individually. Research variables were defined operationally – according to the measuring instruments: the number of narrative sentences, the total number of words, the number of words in sentence, the number of stimuli. Words were separated by types.

Descriptive statistics were calculated for all variables and for all samples. Differences between samples were tested on all variables by applying the Cochran –Cox method for testing differences between small independent samples.

Results showed the following: statistically significant differences were found on two variables – narration and questionnaire results related to verbal description of language abilities. The children with DS achieved significantly lower results than children with WS and children with typical development. However, statistically significant difference between children with WS and children with regular development was not found. The results confirm deficient narrative expression in children with DS and relatively well preserved narrative expression in children with WS. These facts are very important for speech and language intervention planning.

Key words: Down syndrome, Williams syndrome, language abilities, narration

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Veštine crtanja kod dece sa lakom intelektualnom ometenošću¹

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Nivo usvojenosti veštine crtanja je prvenstveno uslovljen sazrevanjem vizuospacijalnih i praktičkih sposobnosti, ali i osnovnih mehanizama pažnje, pamćenja i mišljenja. Cilj ovog istraživanja je da se utvrdi nivo usvojenosti veštine crtanja kod dece sa lakom intelektualnom ometenošću

Uzorkom je obuhvaćeno 65-oro dece sa lakom intelektualnom ometenošću (IQ 50-70; AS=60,03; SD=7,365), uzrasta 10-14 godina. Analizom dokumentacije pedagoško-psihološke službe škola prikupljeni su podaci o uzrastu i intelektualnim sposobnostima ispitanika.

Za procenu veštine crtanja korišćen je subtest Crtanje, koji pripada ACADIA testu razvojnih sposobnosti. Od deteta se očekuje da nacрта čoveka koji stoji ispod drveta, pored kuće. Ocenjuje se na osnovu prepoznatljivosti, tačnosti proporcija, bogatstva detalja i međusobnog odnosa zadatih elemenata. Maksimalan skor je 20 poena. Rezultati subtesta su rangirani prema uzrasnim normama i grupisani u tri kategorije: postignuća koja odgovaraju uzrastu (prosek), postignuća koja odstupaju jednu standardnu devijaciju i postignuća koja odstupaju dve standardne devijacije (SD) od prosečnih postignuća.

U statističkoj obradi podataka su korišćeni Spirmannov koeficijent korelacije i χ^2 test.

Prema rezultatima našeg istraživanja, svega četvrtina (24.6%) dece sa lakom intelektualnom ometenošću na subtestu Crtanje postiže rezultate koji su u skladu sa uzrastom, postignuća 41.5% odstupaju jednu, a 33.8% ispitanika dve standardne devijacije u odnosu na uzrasne norme. Utvrđena je statistički značajna korelacija ($p \leq 0.000$) uzrasta i rezultata primenjenog subtesta, što ukazuje na postojanje razvojnog potencijala u oblasti vizuokonstruktivnih sposobnosti kod dece sa lakom intelektualnom ometenošću. Iako je korelacija postignuća na subtestu Crtanje i pola statistički značajna ($p=0,031$), na polu zasnovane razlike rezultata su nešto ispod granice statističke značajnosti ($p=0,067$).

Ključne reči: laka intelektualna ometenost, crtanje, uzrast, pol

¹ Rad je proistekao iz projekta „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“, broj 179025 (2011-2014), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

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Drawing skills in children with mild intellectual disability¹

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The level of acquired drawing skill primarily depends on maturation of visuo-spatial and praxical abilities, and on basic mechanisms of attention, memory and thinking. The main goal of this research is to determine the acquired level of drawing skills in children with mild intellectual disability (MID). The sample consisted of 65 children with MID (IQ 50-70; M=60,03; SD=7,365), aged between 10-14. Data on age and intellectual abilities were acquired by analyzing the documentation obtained from pedagogical-psychological services.

Drawing skill was assessed by subtest Drawing, which is a part of ACADIA test of developmental abilities. The child is required to draw a man who stands below a tree and beside a house. Evaluation is based on recognizability, accuracy of proportions, number of details and mutual relationship between the specified elements. Maximum score on this task is 20. The results of this subtest are ranked according to age norms and grouped in three categories: achievements that are age appropriate (average), achievements that differ by one standard deviation, and achievements that differ by two standard deviations from average achievements. Measures of Spearman's coefficients of correlation and χ^2 test were used in statistical analysis.

According to the results of our research, only quarter (24.6%) of children with MID achieve age appropriate results, 41.5% of children differ by one standard deviation, and 33.8% of them differ by two standard deviations from age norms. Statistically significant correlation ($p \leq 0.000$) between age and drawing results was determined, which indicates the existence of developmental potential in the area of visuo-constructive abilities in children with MID. Even though there is a significant correlation between drawing abilities and gender ($p = 0,031$), gender differences in drawing abilities are somewhat below the level of statistical significance ($p = 0,067$).

*Key words: mild intellectual disability, drawing,
age, gender*

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¹ This paper results from the project „Developing a protocol for the assessment of educational potentials in children with disabilities as a criterion for the development of individual education programs” nr. 179025 (2011-2014), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

Prepoznavanje i prezentovanje bazičnih emocija putem crteža kod gluve i nagluve dece mlađeg školskog uzrasta¹

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Veoma je mali broj istraživanja koja ispituju sposobnost gluve i nagluve dece da prepoznaju emocije. Prepoznavanje emocija ne utiču samo na socijalne interakcije sa okolinom, već i na sposobnost osobe da predvidi šta će se na osnovu prikazanih emocija verovatno desiti u daljoj interakciji sa osobom sa kojom komunicira. Osnovni cilj istraživanja je utvrditi u kojoj meri gluva i nagluva deca mlađeg školskog uzrasta prepoznaju i prezentuju emocije putem crteža. Uzorak čini 52 učenika II, III i IV razreda osnovne škole, oba pola. Eksperimentalnu grupu (EG) čini 22 gluvih i nagluvih ispitanika, a kontrolnu grupu (KG) 30 ispitanika urednog sluha. Instrument za prepoznavanje emocija se sastoji od 4 slike na kojima su predstavljene bazične emocije na ljudskim licima sa ponuđenim odgovorima (srećan, tužan, ljut, iznenađen). Nakon toga, ispitanici je trebalo da nacrtaju sebe kada su srećni, tužni, ljuti i iznenađeni. Za utvrđivanje značajnosti odnosa između posmatranih varijabli korišćene su mere varijabilnosti, χ^2 test i jednofaktorska analiza varijansi. Rezultati istraživanja ukazuju da ne postoji razlika u prepoznavanju ($p=0,711$) i crtanju emocija ($p=0,378$) između gluvih i nagluvih ispitanika i ispitanika urednog sluha. Razlike su prisutne samo u prezentovanju emocija putem crteža između dečaka i devojčica ($p=0,019$). Naime, devojčice su bile us-

pešnije u prikazivanju onih delova na licu koji najviše doprinose definisanju emocija (oblik i veličina glave, usta, oči, trepavice i obrve).

Ključne reči: emocije, prepoznavanje, crtanje, gluva i nagluva deca, deca urednog sluha

¹ Rad je proistekao iz projekta „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“, broj 179025 (2011-2014), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

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The recognition and presentation of basic emotions of deaf and hard of hearing children at early school age by means of drawing¹

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There are very few researches which test the ability of deaf and hard of hearing (D/HH) children to recognize emotions. Recognition of emotions does not only affect social interaction with the environment, but also the ability to predict what is going to happen in further communication with that particular person. The main goal of this research is to determine the extent to which D/HH children at an early school age are recognizing and presenting emotion through means of drawing. The sample consists of 52 pupils of both genders who attend II, III, IV grade of elementary school. The experimental group (EG) consists of 22 D/HH participants and the control group (CG) consists of 30 participants with regular hearing. The instrument for recognizing emotions consists of 4 pictures with basic emotions on human faces (happy, sad, angry, surprised). After that, the participants were supposed to draw themselves when they are happy, sad, angry, and surprised. For determining the significance of relations between the observed variables we used the measures of variability, χ^2 test and the one factor analysis of variance. Research results indicate that there is no difference in recognizing and drawing emotions between D/HH participants and regular hearing ones. The differences are only present in presentation of emotions by means of

drawing between boys and girls. In other words, girls are more successful at presenting parts of the face which define emotions the most (the shape and size of the head, mouth, eyes, eyelashes and eyebrows).

Key words: emotion, recognition, drawing, deaf and hard of hearing children, children with regular hearing

¹ This article results from the project „Designing a Protocol for Assessing the Educational Potentials of Children with Disabilities as a Criterion for Development of Individual Educational Programs” (No. 179025), financially supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

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Uticaj okolne buke na neposredno auditivno pamćenje kod kohlearno implantirane dece¹

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Odsek za audiološku rehabilitaciju sluha i govora

Primena kohlearnog implanta dovela je do značajnog poboljšanja u percepciji zvukova, kvalitativno boljeg slušanja i razvoja auditivnog pamćenja kod gluve dece. Auditivno pamćenje je jedan od osnovnih uslova za razvoj jezičkih sposobnosti. Auditivno (slušno) pamćenje je sposobnost se informacije prezentovane usmeno, analiziraju mentalno, sačuvaju i upotrebe kada je potrebno. Osobe sa jakim kapacitetom ove vrste memorije nazivaju se „auditory learners”. Osnova za razvoj auditivnog pamćenja je očuvana funkcija sluha. Praktična ili potpuna gluvoća, kongenitalna ili stečena, može potpuno da zaustavi ili ozbiljno ometa formiranje i razvoj auditivnog pamćenja. Teškoće auditivnog pamćenja javljaju se i kod deceurednog sluha. U tom slučaju trebalo bi da budu obuhvaćene preventivnim korektivnim merama, u cilju sprečavanja njihovog produbljanja i značajnijeg odražavanja na razvoj drugih sposobnosti i veština.

Cilj istraživanja da se ispita uticaj okolne buke na sposobnost neposrednog auditivnog pamćenja kod kohlearno implantirane dece.

Uzorak u istraživanju je dvadesetoro kohlearno implantirane dece, uzrasta od 4 do 10 godina, pro-

sečnih intelektualnih sposobnosti, bez udruženih smetnji u razvoju. Deca u ispitivanom uzorku imaju najmanje 12 meseci slušnog uzrasta sa kohlearnim implantom (CI).

Instrument je Test za ispitivanje sposobnosti verbalnog pamćenja I-IV (Vladislavljević, 1983) namenjen deci sa smetnjama u auditivnoj percepciji i verbalnoj memoriji, koja se sem u populaciji dece oštećenog sluha, najčešće javlja kod dece sa disfazijom. Ovim testom može se ispitivati opseg auditivne memorije, neposredno i odloženo verbalno pamćenje, redosled reprodukcije, gramatičkurazvijenost i semantičko shvatanje poruke. Za potrebe ovog istraživanja ovim testom ispitivali smo neposredno verbalno pamćenje sa i bez okolne buke.

Za utvrđivanje značajnosti odnosa između posmatranih varijabli korišćeni su koeficijent korelacije, analiza varijanse i χ^2 test.

Rezultati ukazuju da se negativan uticaj okolne buke, na neposredno auditivno pamćenje kod kohlearno implantirane dece, povećava sa porastom težine zadataka.

Ključne reči: gluvo dete, kohlearni implant, auditivno pamćenje, buka

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1 Rad je proistekao iz projekta „Uticaj kohlearne implantacije na edukaciju gluvih i nagluvih osoba”, broj 179055 (2011-2014), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

Impact of environmental noise on immediate auditory memory in cochlear implanted children¹

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Cochlear implantation has considerably improved the perception of sounds, quality of listening and auditory memory of deaf children. Auditory memory is among basic conditions for speech and language development. Auditory memory is the ability to perceive, analyze, store and retrieve verbally presented information. Persons with good auditory capacity are called „auditory learners”. Normal listening is essential for the development of auditory memory. Practical or total deafness, whether congenital or acquired, could prevent or seriously disturb the development of auditory memory. Even children with normal hearing can have auditory memory disorders. They need intervention in order to prevent developmental consequences.

The aim of this study was to investigate the impact of the environmental noise on auditory memory capacity in cochlear implanted children.

The sample consisted of twenty cochlear implanted children aged between 4 and 10. All of the children in this study had normal intellectual abilities and no additional disorders. They had at least 12 months of cochlear implant (CI) experience.

The instrument used was Test of immediate verbal memory (I-IV) by S. Vladislavljevic (1983), designed for children with auditory perception and verbal memory disorders, which appear in both hearing impaired and dysphasic children. The test is used for memory span assessment, immediate and delayed memory, rehearsal order, grammar and semantic comprehension of the message. In this study, we applied the test both in quiet and noisy environments.

Statistical significance between variables was tested using correlation coefficient, variance analysis and chi square test.

Key words: deafness, children, cochlear implant, auditory memory, noise

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1 This paper originated from the scientific project „Effects of cochlear implantation on education of deaf and hearing impaired individuals”, no. 179055 (2011-2014), the implementation of which is financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

Tipovi artikulacionih grešaka u govoru kohlearno implantirane dece¹

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govora, normalizuju svoj osnovni glas i poboljšavaju svoje artikulacione sposobnosti.

Ključne reči: kohlearni implant, artikulacija, greške

Poslednjih decenija u većini zemalja intenzivno se razvijaju programi kohlearne implantacije koji su značajno doprineli povećanju efikasnosti auditivne rehabilitacije gluvih osoba. Efekti ovih programa se veoma brzo uočavaju uvidu poboljšanja slušnih i govornih sposobnosti kohlearno implantiranih osoba. Međutim, i pored značajnog napretka i dalje se mogu uočiti različiti tipovi artikulacionih grešaka u govoru kohlearno implantiranih. Cilj ovog rada je bio da se utvrdi učestalost i tipovi artikulacionih grešaka, kao i da se ispita uticaj nekih vremenskih demografskih faktora. U uzorku je bilo 25 dece uzrasta od 3 do 10 godina oba pola. Korišćen je Globalni artikulacioni test (S. Vladislavljević) i rađena je klasifikacija tipova artikulacionih grešaka na osnovu ček-liste najčešće prisutnih odstupanja u artikulacionoj bazi srpskog jezika. U obradi rezultata korišćene su metode deskriptivne statistike i ANOVA. Rezultati pokazuju da se u govoru kohlearno implantirane dece javljaju sva tri tipa artikulacionih odstupanja (omisija, supstitucija i distorzija), da se artikulacione greške javljaju u svim grupama glasova ali da se najčešće javljaju u grupi afrikata i frikativa. Međutim, rezultati takođe pokazuju da gluva deca koja su kohlearno implantirana ranijem uzrastu i koja su obuhvaćena odgovarajućim programima rehabilitacije postižu bolju auditivnu kontrolu svog

1 Rad je proistekao iz projekta „Uticaj kohlearne implantacije na edukaciju gluvih i nagluvih osoba”, broj 179055 (2011-2014), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

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Types of articulation errors in speech of cochlear implanted children¹

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rehabilitation programs achieve better control of their auditory speech, normalize their basic voice and improve their articulation skills.

Keywords: cochlear implant, articulation, errors

In recent decades, in most countries, cochlear implant programs have been developing intensively, and they have significantly contributed to increasing the efficiency of auditory rehabilitation of deaf persons. The results of these programs are noticeable in a short time and they involve the improvement in hearing and speaking abilities of cochlear implanted persons. However, despite the significant improvement, different types of articulation errors in speech of cochlear implanted people are still present. . The aim of this study was to determine the frequency and types of articulation errors, and to examine the influence of demographic factors. The sample included 25 children aged between 3 and 10. We used the Global articulation test (S. Vladislavljević) and classified types of articulation errors by using a checklist of most frequent differences in the articulation base of the Serbian language. Descriptive statistics and ANOVA were used for data analysis. The results show that all three types of articulation errors (omission of speech, substitution and distortion) occur in the speech of cochlear implanted children and that articulation errors occur in all groups of sounds, but are most frequent in the group of fricatives and affricates. . The results also show that deaf children who have had cochlear implants from an early age and are included in the appropriate

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Slušne i govorne vežbe dece sa kohlearnim implantom – Set testova

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Slušnim i govornim vežbama razvijamo sposobnost slušne i govorne komunikacije dece sa kohlearnim implantom. Ovim vežbama se razvija: svest deteta o postojanju zvukova i glasova iz okoline, slušna kontrola, prozodijski elementi govora, verbalne veštine. Cilj rada je prikaz seta testova koji se koriste u Školi „Stefan Dečanski” radi procene nivoa slušanja, kao i procene uspešnosti slušnih i govornih vežbi kod učenika sa kohlearnim implantom. Set sadrži sledeći testovni materijal: LIP – profil napretka slušanja (S.Archbold, Nottingham, Engleska); Zvuci iz okoline (S.Archbold, Nottingham, Engleska); MTP (jednosložne-dvosložne-višesložne reči, Norman Erber); Test auditivne percepcije po frekvencijama – samo reči (M.Golubović, D.Stevanović); Test auditivne percepcije po frekvencijama – reči i rečenice (M.Golubović, D.Stevanović); Test spontanog razumevanja pitanja – GASP (Erber NP. Washington DC: Udruženje gluvih „Alexander Graham Bell”); Globalni artikulacioni test + slušanje izolovanih glasova; Fonemski sluh (S.Vladislavljević). Testovi suprilagodjeni našem jeziku i potrebama. Jedan od testova koji smo samostalno izradili je i Test auditivne percepcije po frekvencijama (M.Golubović, D.Stevanović). Ovaj test je napravljen pre početka implantacije u Srbiji, kako bi se pratio napredak dece koja su bila na rehabilitaciji u Školi „Stefan Dečanski”, a implantirana su u inostranstvu. Globalni artikulacioni test (Đ.Kostić,

S.Vladislavljević) je adaptiran dodavanjem tabele za slušanje izolovanih glasova. Predstavljeni set testova omogućava surdolozima, pored praćenja napretka učenika izraduplana daljeg slušnog i govorno jezičkog razvoja KI (kohlearno implantirane) dece.

Ključne reči: slušne i govorne vežbe, kohlearni implant, testovi, deca

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Hearing and speech exercises for children with cochlear implants – Set of tests

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Hearing and speech exercises are used to develop the ability of hearing and voice communication of children with cochlear implants. These exercises develop a child's awareness of the existence of sounds and voices from the environment, hearing control, prosodic elements of speech, and verbal expression skills. The main goal of this paper is to present a set of tests which are used in school, „Stefan Dečanski,” to assess the development of listening, and estimate the success of hearing and speech exercises for students with cochlear implants. The set contains the following test material: LIP – profile of hearing improvement, sounds from the environment (S. Archbold, Nottingham, England); MTP (monosyllabic-two-syllable-polysyllable, Norman Erber); Test of auditory perception by frequency – words only (M. Golubović, D. Stevanović); Test of auditory perception by frequency – words and sentences (M. Golubović, D. Stevanović); Test of spontaneous understanding of questions – GASP (Erber NP. Washington DC: Alexander Graham Bell Association for the Deaf and Hard of Hearing), Global articulation test + listening isolated sounds; Phonemic hearing (S. Vladislavljević). These tests have been adapted to our language and needs. One of the tests that we have independently developed is the Test of auditory perception by frequency. This test was developed prior to the implantation in Serbia, in order to monitor the progress of children who were

in rehabilitation at „Stefan Dečanski” school and were implanted abroad. Global articulation test (Đ. Kostić, S. Vladislavljević) has been adapted by adding a table for listening isolated sounds. The presented set of tests enables hearing and speech therapist to monitor students' progress and to make plans for further hearing, speech and language development of CI (cochlear implanted) children.

Keywords: auditory and speech exercises, cochlear implant, tests, children

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Porodični riziko faktori i socijalna kompetentnost dece

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Problem istraživanja svodi se na pitanje da li postoje značajne razlike u razvijenosti socijalnih veština dece u odnosu na prisustvo i odsustvo problema u porodičnoj sredini. Cilj istraživanja je da se utvrdi povezanost između problema u porodičnom funkcionisanju i razvijenosti socijalnih veština dece. Problemi u porodičnom funkcionisanju podeljeni su na: socio-ekonomski problemi; partnerski konflikti i razvod; mentalno zdravlje roditelja; destruktivno ponašanje roditelja prema deci. Za ispitivanje socijalnih veština korišćena je skala Social Skills Rating System (Gresham, Elliott, 1990) koja se sastoji iz subskala: kooperativnost, odgovornost, asertivnost i samokontrola. Uzorak je činilo 414 dece uzrasta od 12 do 18 godina. Rezultati su pokazali da socioekonomski problemi nisu značajno povezani sa razvijenošću socijalnih veština, a da su ostale grupe porodičnih problema statistički značajno povezane sa nekim socijalnim veštinama dece. Deca koja su imala iskustvo zlostavljanja ili zanemarivanja u svojoj porodici imaju značajnije niže skorove na Samokontroli ($t=4.35$; $p<0.000$) i Odgovornosti ($t=2.74$; $p<0.006$) u odnosu na decu koja nisu imala ovakva iskustva. Isto tako, deca roditelja koji imaju problema sa mentalnim zdravljem pokazuju značajnije niži nivo Samokontrole ($t=4.63$; $p<0.000$) i Odgovornosti ($t=2.40$; $p<0.017$) nego deca čiji su roditelji dobrog

mentalnog zdravlja. Česti konflikti roditelja i razvod, takođe, doprinose nižoj Samokontroli ($t=2.94$; $p<0.003$) i Odgovornosti ($t=2.89$; $p<0.004$), ali i nižoj Kooperativnosti ($t=2.91$; $p<0.003$) dece. Asertivnost nije značajno povezana sa ispitivanim porodičnim varijablama. U zaključku autori ukazuju na pedagoške implikacije dobijenih rezultata i potrebu za ranom intervencijom u porodici u cilju razvijanja socijalnih veština i podsticanja prosocijalnog ponašanja, te prevencije emocionalnih i problema u ponašanju dece. Takođe, dobijeni nalazi otvaraju mogućnost daljih istraživanja o povezanosti ispitivanih porodičnih varijabli i socijalnih veština sa različitim aspektima socijalne kompetentnosti dece.

Ključne reči: porodica, socijalne veštine, socijalna kompetentnost, rana intervencija

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Family risk factors and social competence of children

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The research problem is focused on the question whether there are significant differences in the development of children's social skills with regard to the presence and absence of specific problems in the family. The aim of the research was to estimate the correlation between family functioning and the development of specific social skills in children. Problems in family functioning are divided into: socio-economic problems; marital conflict and divorce; mental illness of parent; negative parental behavior towards children. Social skills are measured by Social Skills Rating System (Gresham, Elliott, 1990), consisting of the following subscales: cooperation, responsibility, assertiveness and self-control. The sample consisted of 414 children aged between 12 and 18. The results showed that socio-economic problems were not significantly related to the social skills development, and that other groups of family problems were statistically significantly related to some social skills in children. Children who have had the experience of abuse or neglect in their families have significantly lower scores on Self-control ($t=4.35$; $p<.000$) and Responsibility ($t=2.74$; $p<.006$) than children who did not have these experiences. Similarly, children of parents with mental health problems showed significantly lower level of Self-control ($t=4.63$; $p<.000$) and

Responsibility ($t=2.40$; $p<.017$) than children whose parents are of good mental health. Furthermore, the findings suggest that frequent marital conflict and divorce, in addition to lower level of Self control ($t=2.94$; $p<.003$) and Responsibility ($t=2.89$; $p<.004$), also have influence on lower Cooperativeness ($t=2.91$; $p<.003$) in children. Assertiveness is not significantly associated with family variables. In conclusion, the authors presented pedagogical implications of the results and the need for early intervention in the family in order to develop social skills and encourage prosocial behavior and prevention of emotional and behavioral problems in children. Also, these findings open the possibility for further research on the association of family variables and social skills to various aspects of social competence in children.

Key words: family, social skills, social competence, early intervention

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Mišljenja ispitanika opšte populacije o mogućnosti komunikacije sa osobama sa mentalnim bolestima

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Cilj: Ispitivanje mišljenja ispitanika opšte populacije o mogućnosti komunikacije sa osobama sa mentalnim bolestima.

Metod: Uzorkom smo obuhvatili 575 ispitanika, oba pola, uzrasta iznad 16 godina, različitog nivoa obrazovanja, različitih zanimanja, iz različitih gradova u Srbiji. U istraživanju je korišćen petostepeni upitnik kojim se ispitivalo mišljenje ispitanika o mogućnosti komunikacije sa osobama sa mentalnim bolestima. Ovo mišljenje je ispitivano pomoću bipolarnih tvrdnji: teško je razgovarati sa njima/lako je razgovarati sa njima.

Rezultati: Za najteže sagovornike ispitanici su se odlučivali za osobe sa narkomanijom (73.4%), alkoholizmom (71.3%) i shizofrenijom (68.2%). Ispitanici koji imaju od 20-24 godine imaju najnegativnije mišljenje o mogućnosti komunikacije sa osobama sa alkoholizmom, narkomanijom i shizofrenijom. Najpozitivniju mogućnost komunikacije ispitanici su videli sa osobama sa poremećajem ishrane (47.5%) i fobijom (39.8%). Ispitanici koji su imali završen master/doktorat su najpozitivnije procenjivali komunikaciju sa osobama sa fobijom i poremećajem ishrane, pa su tako u 62.5% slučajeva izjavljivali da je lako razgovarati sa osobama sa fobijom, a u 68.8% sa osobama sa poremećajem ishrane.

Zaključak: Iz priloženih rezultata se uočava da je najnegativnije mišljenje o tome koliko je lako, odnosno teško razgovarati sa osobama sa mentalnim bolestima ispoljeno prema osobama sa narkomanijom, alkoholizmom i shizofrenijom, i to od strane mlađih ispitanika, što ukazuje na potrebu za dodatnom edukacijom mlađih osoba u anti-stigma kampanjama. Najobrazovaniji ispitanici su imali najpozitivnije mišljenje o mogućnosti komunikacije prema osobama sa fobijom i poremećajem ishrane, što potvrđuje potrebu za permanentnom edukacijom o mentalnim bolestima.

Ključne reči: mentalne bolesti, stigmatizacija, komunikacija

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General public opinions on the possibility of communication with persons with mental illnesses

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Aim: to explore opinions of general public on the possibility of communication with persons with mental illnesses.

Method: The sample consisted of 575 participants, male and female, over the age of 16, of various levels of education and employment, members of general public from different towns in Serbia. The opinions were assessed through answers to five-point questionnaire with bipolar statements, i.e. it is difficult/it is easy to talk to them.

Results: Participants were of the opinion that persons most difficult to communicate with were drug addicts (73.4%), alcohol addicts (71.3%) and persons suffering of Sch (68.2). Younger participants (20-24 years of age) had the most negative opinions. According to the participants, the least problems in communication are present with persons with eating disorders (47.5%) and persons with phobias (39.8%). High percentage of the participants with a master's and a doctoral degree decided that it is easy to communicate with persons with phobias (62.5%) and with persons with eating disorders (68.8%).

Conclusion: Participants of this study marked drug and alcohol addicts and persons suffering of Sch as the most difficult ones for communication. With regard to age, young participants had the most negative opinions, which indicates the necessity of

additional education of young people in anti-stigma campaign. The most educated participants had the most positive attitudes toward the possibility of communication with persons with phobias and with eating disorders. The results point to the necessity of permanent education on mental illnesses.

Key words: mental illnesses, stigmatization, communication

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Provera mogućnosti Inventara depresivnosti mladih na adolescentima bez ometenosti kao osnova za modifikovanje instrumenta za adolescente sa ometenošću¹

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Ovaj rad se bavi proverom metrijskih karakteristika Inventara depresivnosti mladih, autora Kovacs (1985; 1992), na populaciji adolescenata bez ometenosti u našoj sredini, sa ciljem da se ovaj instrument modifikuje za primenu na populaciji adolescenata sa ometenošću. Proces provere i pripreme instrumenta za upotrebu na adolescentima sa ometenošću u našoj sredini započeo je njegovom proverom (Dimoski i sar., 2011) na gluvim adolescentima, učenicima Srednje škole za obrazovanje omladine oštećenog sluha „Stefan Dečanski” u Beogradu, kao jednom podgrupom adolescenata sa ometenošću. Inventar depresivnosti mladih široko je primenjivan u Evropi i Americi, kako na adolescentima bez ometenosti, tako i na adolescentima sa ometenošću. Uzorak ovog istraživanja predstavlja 131 ispitanik. Ispitanici su učenici srednjih medicinskih škola u Beogradu i Vojvodini. Procenjena je pouzdanost instrumenta izražena preko unutrašnje konzistentnosti Kronbachovim alfa koeficijentom (0.713), kao i pouzdanost subskala (raspoloženje 0.655; samopouzdanje 0.650; neuspešnost 0.389; nezadovoljstvo 0.396; socijalnost 0.145). Izvršena je i ajtem analiza. Dobijeni rezultati su upoređivani sa pouzdanošću instrumenta na populaciji adolescenata sa ometenošću (gluvi). Depresivnost adolescenata bez ometenosti (AS=38.19) manja je od depresivnosti adolescenata

sa ometenošću (AS=54.49). Ovaj nalaz predstavlja snažan argument za dalja istraživanja mogućnosti procene depresivnosti adolescenata sa ometenošću. Zaključak ovog istraživanja govori o potencijalima Inventara depresivnosti mladih za primenu u našoj sredini, ali i o nužnim daljim istraživanjima koja bi dala odgovore o faktorskoj strukturi i primenljivosti celog instrumenta, odnosno njegovih pojedinih subskala.

Ključne reči: inventar depresivnosti, pouzdanost instrumenta, adolescenti sa ometenošću;

¹ Rad je realizovan u okviru projekta „Efekti primenjene fizike aktivnosti na lokomotorni, metabolički, psiho-socijalni i vaspitni status populacije Srbije”, pod brojem III47015, a kao deo potprojekta „Efekti primenjene fizičke aktivnosti na lokomotorni, metabolički, psiho-socijalni i vaspitni status populacije osoba sa posebnim potrebama R Srbije” koji je finansiran od strane Ministarstva prosvete, nauke i tehnološkog razvoja Republike Srbije.

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Checking the Inventory of youth depression on adolescents without disability, as a basis for modifying the instrument for disabled adolescents¹

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This paper deals with verification of measuring characteristics of Inventory of youth depression (Kovacs, 1985; 1992) among adolescents without disabilities in our community, in order to modify the instrument for usage in a population of adolescents with disabilities. The process of checking and preparing the instrument for usage on adolescents with disabilities in our community, began with its application on deaf adolescents (Dimoski & associates, 2011). The students of high school for the education of hearing impaired „Stefan Decanski” in Belgrade were selected as a subgroup of adolescents with disabilities. Inventory of youth depression is widely applied in Europe and America, both on adolescents without and with disabilities. The sample included 131 respondents. The subjects were students of secondary medical school in Belgrade and Vojvodina. Reliability of the instrument is expressed through internal consistency by Cronbach alpha coefficient (0.713) and subscale reliability (0.655 mood; confidence 0.650; failure 0.389; dissatisfaction 0.396; sociability 0.145). Also, item analysis was conducted. The results were compared with the reliability of the Instrument used in a population of adolescents with disabilities (deaf). Depression in adolescents without disabilities (M=38.19) is lower than depression in adolescents with disabilities (M=54.49). This finding

provides a strong argument for further research of possibilities to assess depression in adolescents with disabilities. The conclusion of this study addresses the potential of Inventory of youth depression for usage in our community, and the necessity for further research that would provide answers about the factor structure and the applicability of the entire instrument and its individual subscales.

Keywords: Inventory of depression, reliability of the instrument, adolescents with disabilities

1 This paper was realized within the project „Effects of the Applied Physical Activity on Locomotor, Metabolic, Psycho-Social and Educational Status of Serbian Population”, nr.III47015, and as a part of the project „Effects of the Applied Physical Activity on Locomotor, Metabolic, Psycho-Social and Educational Status of Persons with Special Needs in Serbia”, financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia

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Mogućnost korišćenja crteža dece s lakom intelektualnom ometenošću za procenjivanje kreativnosti u vizuelnom domenu izražavanja¹

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Teorije i istraživanja ukazuju da se u dečjim crteža mogu naći različiti podaci, od znakova raznovrsnih poremećaja, do najave izuzetne kreativnosti. Istraživanje prikazano u ovom radu ima za cilj utvrđivanje povezanosti između kreativnog potencijala i kreativnosti likovnog crteža kod dece s lakom intelektualnom ometenošću (LIO) kako bi se ispitala mogućnost korišćenja crteža za procenjivanje kreativnosti u vizuelnom domenu izražavanja.

Uzorkom je obuhvaćeno 69 učenika iz četiri beogradske škole za decu ometenu u intelektualnom razvoju, oba pola, kalendarskog uzrasta od 8-16 godina, školskog uzrasta od I do VIII razreda, bez neuroloških i višestrukih smetnji. U svrhu procene kreativnosti dece primenjeni su Test za kreativno mišljenje koje se meri crtanjem (Test for Creative Thinking-Drawing Production – TCT-DP), kojim se procenjuje vizuelni aspekt kreativnosti, i crtež na temu „Neobičan cvet”, pri čemu su kao kriterijumi za procenjivanje dečjih radova korišćeni upotreba boje, oblika, prostorna organizacija i proporcija elemenata crteža.

Korelacija između skorova kreativnosti dobijenih testom kreativnog mišljenja i analizom likovnih crteža učenika, izračunata pomoću Pirsonovog koeficijenta linearne korelacije, iznosi 0,34, što je statistički značajan rezultat ($p=0,003$).

Budući da dobijeni rezultati pokazuju da je korelacija između skorova kreativnosti dobijenih TCT-DP testom i analizom likovnih crteža učenika pozitivna i značajna, može se zaključiti da se u crtežima dece s LIO mogu naći pokazatelji kreativnosti. Edukatorima dece s LIO preporučujemo pokazatelje kreativnosti definisane našim istraživanjem kao smernice u razumevanju dečjih radova i kao podsticaj za preispitivanje sopstvenih kriterijuma kreativnosti.

Ključne reči: vizuelni aspekt kreativnosti, dečki crtež, laka intelektualna ometenost

Apstrakt predstavlja rezultat rada na projektu „Socijalna participacija osoba sa intelektualnom ometenošću”, broj 179017 (2011-2014), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

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The possibility of using drawings of children with mild intellectual disability for assessing creativity in the visual domain of expression¹

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Theories and research imply that diverse information can be obtained from children's drawings, from signs of various disorders, to indications of exceptional creativity. The research presented in this paper aims to determine the connection between the creative potential of children with mild intellectual disability (MID) and the creativity of their drawing, in order to test the possibility of using drawings for assessing creativity in the visual domain of expression.

The sample comprised 69 students from four schools for children with intellectual disability in Belgrade, of both sexes, aged 8-16, attending the 1st to the 8th grade, with no neurological or multiple disorders. For the purpose of assessing the children's creativity, Test for Creative Thinking-Drawing Production (TCT-DP) was used to estimate the visual aspect of creativity, as well as a drawing with the topic „Peculiar flower”, where, as criteria for assessing the children's works, we observed the use of color and shapes, spatial organization and proportion of the elements in the drawing.

Correlation between the scores obtained through the test for creative thinking and through the analysis of children's drawings, calculated using the Pearson Correlation Coefficient, equals 0,34, which is a statistically significant result ($p=0,003$).

Considering that the results show that the correlation between the scores of creativity obtained through the TCT-DP test and the analysis of students' drawings is positive and significant, it can be concluded that indicators of creativity can be found in children with MID. We advise the educators of children with MID to use the indicators of creativity defined in our study as guidelines for understanding children's works, but also as an encouragement for questioning their own creativity criteria.

Key words: visual aspect of creativity, children's drawing, mild intellectual disability

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This abstract results from the project „Social Participation of Persons with Intellectual Disability” financed by the Ministry of Education, Science and Technological Development Republic of Serbia (No. 179017).

Motoričke sposobnosti i ponašanje dece sa lakom intelektualnom ometenošću¹

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U radu su razmatrane motoričke sposobnosti i karakteristike ponašanja učenika sa lakom intelektualnom ometenošću. Uzorak su činili ispitanici sa lakom intelektualnom ometenošću, čiji se količnik inteligencije kreće od 51-70 procenjen WISC skalom, oba pola koji pohađaju osnovne škole u Beogradu. Motoričke sposobnosti ispitane su kliničkim, razvojnim skalama baterije Lurija-Nebraska za decu (Golden, 1987), a ponašanje Konersovom skalom procene (K. Conners, 1969) kojom se dobija uvid u ponašanje u obrazovnim uslovima. Opšti podaci o ispitanicima i školskom uspehu preuzeti su iz standardne školske dokumentacije. Utvrđeno je postojanje statistički značajne povezanosti među ispitanim varijablama i ukazano na praktične mogućnosti uključivanja učenika sa lakom intelektualnom ometenošću u rehabilitacione oligofrenološke programe.

Ključne reči: intelektualna ometenost, motoričke sposobnosti, ponašanje

1 Rad je proistekao iz projekta „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“, broj 179025 (2011-2014), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

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Motor abilities and behavior in children with mild intellectual disability¹

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This study focused on the assessment of perceptive-motor and behavioral developmental dimensions and manifestations of children with intellectual disability. The sample consisted of the examinees with mild intellectual disability whose IQ ranged from 51-70 according to the results of WISC scale, of both genders, who attend Belgrade primary schools. Motor abilities were tested by clinical developmental scales of Luria-Nebraska battery for children (Golden, 1987), while behavior was tested by Conners assessment scale (Conners, 1969) which provides an insight into behavior and attention in educational environment. General information about respondents and their school success were collected from the standard school records. Statistically significant correlation was determined in the tested variables. Also, conceptual and practical possibilities of conducting a multimodal treatment were pointed out.

*Key words: intellectual disability, motor skills,
behavior*

¹ This paper results from the project „Developing a protocol for the assessment of educational potentials in children with disabilities as a criterion for the development of individual education programs” nr. 179025 (2011-2014), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

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Oblici tretmana u specijalnoj edukaciji i rehabilitaciji

*Treatment approaches in special education and
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Effective early childhood programs for students on the autism spectrum: case study, orange county florida

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Early Intervention services are critical to the success of students on the Autism Spectrum. In the US, Preschool programs have been developed covering four goal domains: Curriculum and Learning Environments; Communication; Social Emotional and Independent Functioning for each student through an Individual Education Plan. This plan is written based on each individual student's academic needs.

Full day Preschool classrooms for students on the Autism Spectrum, ages 3-5, have been designed to incorporate these goals addressing each student's I.E.P. in the classroom. Through this model, specific interventions for each domain are incorporated into the academic schedule in order to prepare for the student's successful transition into a more inclusive setting for Kindergarten.

In Orange County, Florida, the tenth largest school district in the United States, a unique program design was developed to serve these particular students. A Pre-Kindergarten classroom, for students with Autism, was created on a High School Campus. This model includes not only an early childhood curriculum, but also a unique classroom design and specific intervention strategies to serve and specifically address the needs of early childhood development for preschool students with Autism. This program also allows High school students to

serve as assistants to the teacher and one on one aides to the students as „Exploratory teachers“. This service delivery enables leadership and disability awareness to occur in a natural classroom setting for the high school students, and to encourage them to seek careers in education. Specific examples of curriculum, behavior techniques, and communication strategies for both preschool and high school assistants will be discussed with visual examples, video, assistive technology and student case studies depicting specific student examples and classroom design.

Keywords: special education, autism, preschool, interventions

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Cool tools for schools

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In the US, Occupational Therapy is a related service that can be delivered by an Occupational Therapist in a classroom or a small therapy setting for special needs students. This can occur within the school setting, in addition to and in support of the standard curriculum. Using specific interventions, the therapist directly integrates techniques that allow student access to their curriculum by addressing their ability to successfully function with curriculum tasks. Through a collaborative practice between the Occupational Therapist and classroom teacher, the professional assesses problematic issues for the individual student, and assists the teacher with interventions, not only for the student, but addressing the entire classroom setting. Occasionally, students are moved to work on specific skills as not to interrupt the class schedule. These strategies enable student academic and social/emotional success within the classroom and academic curriculum as well as support best practice for inclusive settings for students with special needs. The areas of consideration would address Fine Motor-Writing; Sensory Integration/Social Emotional; Seating and Positioning. Visual and Product examples will be provided in all areas.

Key words: Occupational Therapy, special needs students, techniques, interventions

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Sign language and cochlear implants – ethics and choices

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It is well known that cochlear implantation offers a potential for oral language acquisition in deaf children. Some of them succeed in developing speech and oral language but some of them are not so successful. In retrospect, cochlear implantation seems to be a great choice for orally successful deaf children. However, the crucial issue is to recognize the factors predicting oral success/failure. As professionals, it is morally and ethically desirable to ponder upon the development of deaf children who are less successful in oral language learning regardless of their cochlear implants. We need to consider an alternative approach.

The age of implantation influences speech and language outcomes. The research studies have yielded mostly consistent results showing that earlier implantation is positively correlated with better language and speech outcomes. However, how early is actually 'early'? Some authors argue that the 'early' implantation timeframe refers to the period of 18 to 24 months of age, whereas others report that even children implanted by the age of four are able to develop speech and language competencies to catch up with their peers by school age.

Most deaf children have a normal early communication development. However many of them lack access to a symbolic system of signs that is natural, efficient

and meaningful for the child. For some parents this communicative symbolic system is ideally represented by sign language. While waiting for cochlear implantation, a deaf child can begin to acquire the real, natural language of the Deaf community. Moreover, by acquiring such a language, a deaf child's cognitive development is equal to that of a typically developing hearing child due to the use of efficient mode of communication.

A deaf child with a sign language as the first language has a complete symbolic communication system, or in other words, has knowledge of a first language. That child will learn spoken language as second language through sound awareness. Second language comprehension and transfer from one language to the other will be more efficient. Researchers emphasize that sign language as the first language does not cause problems in oral language learning nor does it limit speech potential of a child. On the other hand, it has been found to benefit socioemotional development and possibly assist in fostering reading and writing skills. This presentation will address the following questions: Which system to use – sign language or simultaneous communication? When to use sign language – all the time or only a portion of time? Which situations and which individuals should sign language be used with? Is bilingualism the goal? Should parents and caregivers stop using sign language at some point, specifically after cochlear implantation? Finally, the presentation will address an important question of whether sign language impedes the acquisition of spoken language.

*Key words: deaf children, cochlear implantation,
sign language*

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Kohlearna implantacija i znakovni jezik – da ili ne?

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Svi se istraživači slažu da kohlearna implantacija predstavlja veliki potencijal za usvajanje govornog jezika u gluhe djece. Neka gluha djeca izuzetno uspijevaju u usvajanju jezika i govora, ali neka i ne. Za djecu koja su uspješna, kohlearna implantacija savršen je izbor. Ali na temelju kojih je faktora moguće predvidjeti eventualni (ne)uspjeh? Moralno je i etički poželjno da si kao profesionalci postavimo pitanje: što je s onom gluhom djecom koja su manje uspješna u učenju govornoga jezika bez obzira na kohlearnu implantaciju? Koja je njihova alternativa?

Poznato je da vrijeme implantacije utječe na jezično-govorni ishod. Rezultati su uglavnom konzistentni – što ranije to bolje. No međutim, što znači „rano“? Neki autori smatraju da je to razdoblje od 18. mjeseca do 2. godine, dok drugi zaključuju da i djeca koja su implantirana do 4. godine dostižu svoje vršnjake u govorno-jezičnoj kompetenciji do polaska u školu.

U pravilu, rani komunikacijski razvoj gluhog djeteta je uredan. Nedostaje jezik kao simbolički sustav znakova koji je učinkovit, smislen za dijete i prirodan.

Za neke roditelje idealan izbor je – znakovni jezik. U razdoblju čekanja na kohlearnu implantaciju gluho dijete usvaja pravi prirodni jezik zajednice gluhih osoba. Ono što valja posebno istaknuti je djetetov kognitivni razvoj, razvoj mozga, koji je uporabom

učinkovitog modaliteta komunikacije jednak djetetu tipičnog razvoja.

Dijete kojem je znakovni jezik prvi jezik ima izgrađen sustav simboličnog načina komunikacije, tj. ima znanje prvog jezika. Za njega će govorni jezik biti drugi jezik kojeg će učiti osvještavajući slušanje. Razumijevanje drugog jezika i prijenos informacija s jednog jezika na drugi bit će učinkovitiji. Istraživači ističu da znakovni jezik kao prvi jezik ne uzrokuje probleme u učenju govornog jezika, ne ograničava govorni potencijal, pridonosi urednom socio-emocionalnom razvoju, a može pridonijeti i vještini čitanja i pisanja. U izlaganju će se pokušati odgovoriti na pitanja kao što su: koji sustav koristiti – znakovni jezik ili simultanu komunikaciju? Kada upotrebljavati znakovni jezik – cijelo vrijeme, samo dio vremena? U kojim situacijama? S kojim osobama? Je li cilj dvojezičnost? Da li prestati znakovati u nekom trenutku? Da li odustati od znakovnog jezika nakon kohlearne implantacije? Šteti li znakovni jezik usvajanju govornog jezika?

*Ključne reči: gluha deca, kohlearna implantacija,
znakovni jezik*

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Physical education and rehabilitation in visually impaired and deaf-blind adults

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Research subject

Sensory systems play an important role in the control of locomotion. Visual and hearing-visual impairment can result in problems in balance, posture, coordination, tension of neck and shoulder muscles and loss of spinal rotation and reciprocal arm swings making independent navigation difficult.

The aim of the study was to examine the different ways in which visually impaired and deaf-blind persons can be motivated to perform regular physical exercises through the use of a physical training program.

Methodology

24 visually impaired and deaf-blind subjects (mean age 54 years) completed the interventions (5-6 weeks long, three 60-minute sessions per week). The exercise program with a changing rhythm of music was designed with the aim of reducing their most common physical problems. Special education and instruction methods were used during the sessions. Motivation was enhanced through sharing several measurements before and after the training period, including weight, blood pressure, flexibility of upper body and trunk and gait analysis. The subjects assessed the effect of the intervention through one open question "Did you feel or notice

any effect of the physical training program?". Participants answered freely in their own words.

Results

The responses showed that the subjects with and without previous physical activities experienced improvements : physical condition in 22 subjects, which gives binomial one-sided confidence interval $CI=0,76$ (confidence level 95%), mental state in 21 subjects, $CI=0,71$ and balance in 11 subjects, $CI=0,28$. Three months after the intervention all subjects had physical activities.

Conclusion

The results improved regardless of age, gender, level of sight or hearing, previous physical activity or inactivity. We propose that in future supervised interventions should last 2-3 months with interim tests to provide exact data about any progress made in adding motivation to perform regular physical exercises.

Keywords: physical education, rehabilitation, visually impaired, deaf-blind

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Pokret u induciranju motoričkog engrama geste u djece s višestrukim razvojnim teškoćama

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Cilj ovog rada je da se prikaže oblik terapijske intervencije koji se sprovodi u grupi djece (11-15 god.) s višestrukim razvojnim teškoćama, uključujući oštećenje vida i sluha. Intervencija se temelji na elementima programa predvježbi Plesa pisanja za najmlađe. Upotrebom glazbe, pjesama jednostavnih stihova, rime i igre ispred ogledala, koji služi kao vizualna podrška doživljaja sebe i vlastitog pokreta, stvaraju se pokreti proizašli iz djetetove interpretacije ili imitacije. Pokreti se izvode cijelim tijelom, u vlastitom prostoru, bez nametanja pravilnog oblika, kroz prirodne kretnje i ritam. Planirane aktivnost usmjerene su prema grupnim i individualnim ciljevima, a uloga terapeuta je predstavljanje sadržaja na adekvatan način i osmišljavanje kreativnih izražaja koji podupiru i induciraju željeni pokret u djeteta. Aktivnost je izvođena s četvero djece na tjednoj bazi u trajanju od 45 minuta.

Osnovna ideja u kreiranju ovog oblika tretmana je bila kako zainteresirati djecu s višestrukim teškoćama za komunikaciju rukom ispod ruke. Pokretu, koji je stereotipan i u funkciji samostimulacije, kroz igru dati raznovrsnost i sposobnost izražavanja. Kako su se događali napreci, kroz dvije godine izvođenja, aktivnost se razvijala te su osmišljene usmjerene teme kao predvježbe za određene geste.

Postavljena je polazna pretpostavaka prema kojoj će se izvođenje samoinduciranih, imitacijskih i/ili vođenih pokreta ogledati u stvaranju motoričkog engrama odgovarajućih gesti u djeteta. U promatranoj grupi djece zabilježene su pozitivne promjene u razvoju gestovne komunikacije, i to u okviru usvajanja novih gesti te u ritmu izmjene slijeda istih u interakciji. Prikazana terapijska intervencija facilitirala je komunikaciju ruka ispod ruke u djece s višestrukim razvojnim teškoćama te nefunkcionalni i stereotipni oblik ponašanja preusmjerila u komunikacijski izričaj.

Ključne riječi: djeca s višestrukim razvojnim teškoćama, komunikacija ruka ispod ruke, predvježbe za geste

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Movement in inducing motor engram of gesture in children with multiple disabilities

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The goal of this paper is to present a form of therapeutic intervention in a group of children with multiple disabilities (aged 11-15). The intervention is based on elements of the pre-writing program Dance Writing in Early Years. Using instrumental music, simple lyric songs, rhyme and dancing in front of a mirror, which serves as a visual support of self-experience and movement, movements derived from child's imitation or interpretation are created. The movements involve the whole body and are performed in one's own space, through natural movement and rhythm, and without the imposition of correct movements.. Planned activities are directed towards group and individual goals where a therapist's role is to introduce content in an appropriate way and design creative expressions which support and induce desired movements. The activity was performed with four children on a weekly basis with duration of 45 minutes.

The main aim of creating this form of treatment was to incite interest for hand in hand communication in children with multiple disabilities. Also the goal was to provide, in the context of play, diversity of movements and attach meaning to stereotypic and self stimulating movements. As the activity developed over two years of performing, specific topics were designed as pre-exercises for certain hand signs.

The initial assumption was that performing self induced, imitating and/or guided movement will result in creating the motor engram of specific hand signs. In the observed group of children, progress in sign language communication was noticed, specifically in adoption of new signs and in the rhythm of their exchange in interaction. Therapeutic intervention shown here facilitated hand in hand communication in children with multiple disabilities and redirected the nonfunctional and stereotypic movement towards communication.

Key words: children with multiple disabilities, hand in hand communication, pre-exercises for signs

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Odnos s potpunim kontaktom i relacijske potrebe u edukaciji Usvajanje vještine hranjenja kod djece s težim intelektualnim teškoćama

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Svaka osoba i svako dijete ima potrebu za odnosom u kojem je zajedno sa drugom osobom. Odnos s potpunim kontaktom je psihoterapijski prisup (Erski-ne) koji omogućava drugačiji promijenjen kontakt kroz istraživanje, usklađivanje i uključivanje u odnos. Naglasak je na razvoju odnosa. Kontakt podrazumijeva svjesnost unutrašnjih i vanjskih procesa. Ključna riječ je kontakt „sada i ovdje” s drugom osobom koja je senzibilizirana i usklađena s našim relacijskim potrebama i koja može odgovoriti na način da su potrebe zadovoljene.

Ideja u pozadini podučavanja vještine hranjenja djece s težim intelektualnim teškoćama je davanje prilika i prostora za učenje, razvoj i djelovanje na osobnoj razini za dijete i učitelja.

U radu su prikazane tri metode koncepta za razvoj odnosa između učitelja i djeteta: Istraživanje, Usklađivanje i Uključivanje. Također su opisane metode i tehnike senzorne integracije kao i psihoterapije plesom i pokretom korištene u radu s tri dječaka s težim intelektualnim teškoćama, teškoćama senzorne integracije i epilepsijom.

Podaci su prikupljeni Procjenom senzorne integracije - Base line, Upitnikom za roditelje, Testom provjere senzorne integracije i Labanovom analizom pokreta. Na temelju dobivenih rezultata dane su terapeutske intervencije koje su uključivale senzornu integraciju i tjelesnu psihoterapiju. Za praćenje

aktivnosti i analizu rezultata korišten je video snimak i Upitnik procjene stupnja podrške u procesu hranjenja.

Rezultati studija slučaja pokazali su da koncept razvoja odnosa s potpunim kontaktom zajedno sa tehnikama senzorne integracije i psihoterapije plesom i pokretom mogu doprinjeti pozitivnim promjenama u ponašanju.

Ključne riječi: odnos s potpunim kontaktom, senzorna integracija, psihoterapija plesom i pokretom, hranjenje

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Contact-in-relationship and relational needs in education Teaching feeding skills to children with severe intellectual disabilities

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Every person and every child needs relationships in which the other person is reciprocally involved. Contact-in-relationship is a psychotherapeutic concept (Erskine) that allows different contact through Inquiry, Attunement and Involvement. The emphasis is on creating relationships. Contact refers to the full awareness of internal and external events. The key word is contact-in-presence of another person who is sensitive and attuned to our relational-needs and who can respond to them in a way that the needs are satisfied.

Thus, the idea behind the process of teaching feeding skills is to provide the opportunity and space to learn, develop and operate on personal level for both teacher and child.

This paper describes three methods of Contact-in-relationship concept: Enquiry, Attunement and Involvement used for relationship development between a teacher and a child. The paper also describes the methods and techniques of sensory integration, as well as dance psychotherapy in the cases of three boys who suffer from severe intellectual disabilities, sensory impairment integration and epilepsy.

Data were collected from Assessment of sensory integration-baseline, the Questionnaire for parents, Screening test of sensory integration and Laban's movement analysis.

Based on the results of the research, therapeutic interventions-which include sensory integration and body psychotherapy, have been suggested. To monitor activities and to analyze the final results, both video recordings and the „Questionnaire of the evaluation of the degree of support and assistance with feeding” were used.

The results of the case studies have shown that the use of Contact-in-relationship concept along with the techniques of sensory integration and dance psychotherapy could contribute to positive changes in behavior, which support the achievements of therapeutic goals.

Key words: relationship, sensory integration, dance movement therapy, feeding skills

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Kreiranje motoričkih igara za djecu s oštećenjem vida i dodatnim teškoćama

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Oštećenja vida s dodatnim utjecajnim teškoćama (oštećenja sluha, motorički poremećaji, intelektualne teškoće i sl.) ne čine zbroj pojedinačnih oštećenja, već stvaraju kompleksni konstrukt utječući na dijete u svim razvojnim područjima (motorika, komunikacija, sensorika, itd.). Motoričke igre svojim sadržajima utječu na normalan zdravstveni status organizma i razvoj kondicijskih sposobnosti, razvijanje lokomocije i stjecanja različitih znanja, vještina i navika, razvoj psihološke dobrobiti djeteta (samopouzdanje, veselje, zadovoljstvo), uz prisutan odgojni moment igre. Tim igrama utječe se na individualne ciljeve definirane za svako dijete te na ciljeve grupe kao cjeline (grupna kohezija, pripadnost grupi, norme ponašanja). Uloga terapeuta u vođenju aktivnosti jest kreiranje dinamike intenziteta i ekstenziteta rada. Terapeut na taj način može utjecati na razinu fiziološkog, psihološkog i intelektualnog opterećenja u skladu s individualnim potrebama svakog djeteta i usklađenosti s njegovim zdravstvenim statusom. Za uspješno kreiranje motoričkih igara treba uzeti u obzir zdravstveni status djeteta/grupe, potrebe i interese djeteta/grupe, terapijske ciljeve, dob i materijalne tehničke uvjete rada. Bitan element u kreiranju motoričkih igara predstavlja i adaptacija prostora i pomagala potrebnih za realizaciju aktivnosti (različiti hvatovi, visina plohe, vizualni kontrast, taktilne plohe, auditivni markeri).

Pomagala moraju pružati što veću autonomiju prilikom izvođenja svakom djetetu. Izbor materijala za izradu pomagala mora biti adekvatan, u skladu s postavljenim terapijskim ciljevima.

Ključne riječi: oštećenja vida s dodatnim teškoćama, motoričke igre, individualni i grupni ciljevi, terapeut

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Creating motor games for children with visual impairment and additional disabilities

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Visual impairment with additional disabilities (hearing disabilities, physical disabilities, intellectual disabilities etc.) are not a sum of single disabilities, but make a complex construct affecting a child on all developmental areas (motor, communication, sensory, etc.). Motor games, with their content, affect normal health status of organism and the development of physical condition abilities, deployment of locomotion and acquisition of different knowledge, skills and habits, child's development of psychological welfare (self-confidence, joy, satisfaction), with the always present educational element of the game. With these games, we impact individual goals set for every child and goals of a group as a whole (group cohesion, group affiliation, behavioral norms). Therapist's role in performing the activity is to create dynamics of intensity and extensity of action. This way, a therapist can influence a level of physical, psychological and intellectual exertion according to every child's individual needs and its health status. In order to successfully create motor games, child's/group's health status, child's/group's needs and interests, therapeutic goals, age and material technical conditions should be considered. An important element in creating motor games is also space and aids adaptation needed for realization of activity (different grasps, the height of surface, visual contrast, tactile surfaces, and auditory markers). When designing

aids, one must consider providing the highest level of autonomy for every child. Choice of materials in aid production must be adequate and in accordance with therapeutic goals.

Key words: visual impairment with additional disabilities, motor games, individual and group goals, therapist

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Potreba za edukacijom zdravstvenih radnika i saradnika za implementaciju nacionalnog programa za prevenciju i lečenje psihofizioloških poremećaja¹

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remećajem, čime bi se približili razvijenim zemlja-
ma u kojima taj broj iznosi oko 7%.

*Ključne reči: prevencija, Nacionalni program,
edukacija, zdravstveni radnici, zdravstveni saradnici*

Podaci o učestalosti smetnji i poremećaja u razvoju u našoj sredini su veoma heterogeni. Uzrok su različiti kriterijumi za njihovo identifikovanje, kao i nedostatak objedinjenih centralizovanih podataka o ovoj populaciji dece, bez čega je nemoguće praćenje kretanja ovih pojava u odnosu na društveno-ekonomske i socijalne promene. Stoga je 2009. godine donet Nacionalni program za prevenciju i lečenje, sa ciljem smanjenja frekvencije psihofizioloških i govornih poremećaja. Ovaj nacionalni program omogućava rano otkrivanje, blagovremeno dijagnostikovanje i sprovođenje habilitaciono/rehabilitacionog tretmana dece sa psihofiziološkim i govornim poremećajima. U cilju efikasne primene navedenog programa postoji potreba za edukacijom pedijatara i ostalog medicinskog osoblja, zapošljavanjem i edukacijom zdravstvenih saradnika – defektologa. To je preduslov za uvođenje organizovanog skrininga dece sa psihofiziološkim poremećajima i govornom patologijom, a delom i transformaciju organizacije zdravstvene službe po ugledu na zemlje u kojima se sprovodi ovaj skrining. Implementacijom Nacionalnog programa preventivne zdravstvene zaštite dece sa psihofiziološkim poremećajima i govornom patologijom značajno bi se smanjio broj dece sa ovim po-

¹ Rad je proistekao iz projekta „Evaluacija tretmana stečenih poremećaja govora i jezika”, broj 179068 (2011-2014), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

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The need for training of medical staff and assistants for the implementation of the national programme for prevention and treatment of psychophysiological disorders¹

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Data on the frequency of developmental disturbances and problems are very heterogeneous in our country. The causes for this are different criteria for their identification, and the lack of unified centralized data on this population of children, without which it is impossible to track the movement of these phenomena with regard to socio-economic and social changes. Therefore, in 2009, National Program for prevention and treatment was adopted, aimed at the decrease of frequency of psychophysiological and speech disorders. This national program provides early detection, timely diagnosis and implementation of habitation/rehabilitation of children with psychophysiological and speech disorders. In the effective implementation of this program there is a need to educate pediatricians and other medical staff, employ and train medical assistants – special education teachers. It is a precondition for the introduction of organized screening for children with psychophysiological disorders and speech pathology, and in part, the transformation of the health service modelled on the countries in which the screening is carried out.

With the implementation of a national programme of preventive health protection of children with psychophysiological disorders and speech pathology, the number of children with psychophysiological

disorders and speech pathology would decrease considerably and reach the number from the developed countries, which is about 7%.

Key words: prevention, National programme, education, medical staff, medical assistants

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¹ The paper results from the project „Treatment Evaluation of Acquired Speech and Language Disabilities”, nr. 179068 (2011-2014), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia

*Poremećaji ponašanja, delinkvencija i kriminal:
Prevenција i rana intervencija*

*Behavioral disorders, delinquency and crime:
Prevention and early intervention*

Implikacije istraživanja bioloških faktora za prevenciju i tretman poremećaja ponašanja¹

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Tokom protekle dve decenije povećano je interesovanje za biološke faktore poremećaja ponašanja u detinjstvu i adolescenciji. Cilj rada je da se omogući sistematski pregled savremenih studija ove problematike i ukaže na implikacije njihovih nalaza za prevenciju i tretman.

Dosadašnja istraživanja sugerišu da genetski uticaji, prenatalne i perinatalne komplikacije, slaba pobudljivost autonomnog nervnog sistema, strukturalna i funkcionalna oštećenja mozga, hormoni, neurotransmiteri i drugi biološki faktori imaju važnu ulogu u razvoju poremećaja ponašanja. Studije bihejvioralne genetike otkrivaju da se 50-60% individualnih razlika u antisocijalnom i agresivnom ponašanju može pripisati genetskim uticajima. Međutim, mehanizmi putem kojih biološki faktori mogu dovesti do poremećaja ponašanja uglavnom nisu poznati. Postojeći podaci ukazuju da su ove veze složene, indirektno i pod uticajem socijalnog konteksta. Napredak saznanja o biologiji poremećaja ponašanja uticao je na praksu u ovoj oblasti. Na primer, neki fiziološki biomarkeri se koriste kao pomoć u dijagnostici, dok se terapija lekovima, zdravstveno obrazovanje, dijeta i fizičke vežbe koriste za promenu uticaja bioloških faktora.

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Specijalni pedagozi poznaju rizične faktore koji deluju u porodici, vršnjačkoj grupi, školi, susedstvu i na širem društvenom nivou, ali su slabije informisani o biološkim osnovama poremećaja ponašanja. Integracija nalaza bioloških istraživanja može predstavljati važan korak u razumevanju etiologije poremećaja ponašanja i ustanovljavanju programa prevencije i tretmana koji su multikomponentni i usmereni na specifične potrebe dece i adolescenata sa poremećajem ponašanja.

Ključne reči: poremećaj ponašanja, biološki faktori, prevencija, tretman

1 Rad je proistekao iz projekta „Socijalna participacija osoba sa intelektualnom ometenošću“ (2011-2014) čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije (broj 179017).

Implication of biological factors research for prevention and treatment of conduct disorder¹

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In the past two decades, there has been an increasing interest in biological factors for conduct disorder in childhood and adolescence. The purpose of this paper is to provide a systematic review of contemporary studies on this issue and to highlight the implications of these findings for prevention and treatment.

Previous research suggested that genetic influences, prenatal and perinatal complications, underarousal of the autonomic nervous system, structural and functional impairments of the brain, hormones, neurotransmitters and other biological factors play an important role in the development of conduct disorder. Behavioral genetic studies revealed that 50-60% of the variance in antisocial and aggressive behavior is attributable to genetic influences. However, the mechanisms by which biological factors may lead to conduct disorder remain largely unknown. Existing evidence indicates that these relationships are complex, indirect and influenced by social context. Advances in the knowledge of the biology of conduct disorder have affected the practice in this field. For example, some physiological biomarkers are used as an aid in the diagnosis, while drug therapy, health education, diet and physical exercise are used to alter the influence of biological factors.

Special educators are acquainted with family, peer, school, neighborhood and broader social level risk factors, but less informed about the biological basis of conduct disorder. Integration of the findings from biological research might be an important step in understanding the etiology of conduct disorder and establishing prevention and treatment programs that are multicomponent and tailored to the specific needs of children and adolescents with conduct disorder.

Keywords: conduct disorder, biological factors, prevention, treatment

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1 This paper is a result of the project "Social Participation of Persons with Intellectual Disability" (2011-2014), which was financed by the Ministry of Education, Science, and Technological Development of the Republic of Serbia (No. 179017).

Interpersonalni identitet mladih

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Istraživanje je vođeno ispitivanjem identitetskih statusa u okviru interpersonalnog identiteta mladih. Specifičnije smo se odredili prema identitetskim statusima istražujući i prisustvo razvojnih prednosti, kako unutarnjih, tako i vanjskih, odnosno da li više dominiraju razvojne prednosti ili jedan od identitetskih statusa. Naime, period adolescencije je obilježen biološkim i socijalnim promjenama koje mogu izazvati nesigurnost u pogledu sebe, povezanosti sa drugima i okruženja. Ove promene mogu voditi ka različitim statusima identiteta, od moratorijuma preko difuzije do isključivog i postignutog identiteta (prema Marcia, 1966; 1967). Istraživanjem je obuhvaćeno 100 mladih sa područja Zenice, koji su popunili ček listu razvojnih prednosti (Žižak i saradnici, 2001) dok je za merenje razvoja interpersonalnog identiteta korišten instrument Benniona i Adamsa (1986) Revised Extended Version of the Objective Measure of Ego Identity Status EOM-EIS-II). Rezultati istraživanja pokazuju da postoje statistički značajne razlike između identitetskih statusa svih dimenzija interpersonalnog identiteta i postignutih unutarnjih i vanjskih prednosti na način da kod mladih su mnogo više zastupljene razvojne prednosti nego bilo koji od statusa dimenzija ($p=.000$). Istraživanje je pokazalo da postoji negativna povezanost između konstruktivnog korištenja slobodnog vremena i statusa difuzije i moratorijuma dimenzije prijateljstva ($p=.010$). S obzirom da su

rezultati pokazali da mladi žive u više prisutnijim razvojnim prednostima od funkcionalnijih, pa i disfunkcionalnijih statusa identiteta, zaključak istraživanja ukazuje na potrebu dubljeg istraživanja identitetskih statusa, s obzirom da sa postignutim identitetom adolescent je samopouzdaniji i više investira u svoje okruženje i veze sa drugima. Očito je da prisustvo razvojnih prednosti nisu dovoljne za odgovor na izazove perioda formacije identiteta.

Ključne riječi: interpersonalni identitet, razvojne prednosti, adolescenti

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Interpersonal identity of youth

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The aim of the study was to explore identity statuses within interpersonal identity of young people. More specifically, we determine identity statuses by exploring the presence of developmental benefits, both internal and external, and whether developmental benefits or one of the identity statuses are more dominant. The adolescence period is marked by biological and social changes that can cause uncertainty about self, relationship with others and the environment. These changes can lead to different statuses of identity, from moratorium and diffusion to the foreclosure and achieved identity (according to Marcia, 1966, 1967). The study included 100 young people from the area of Zenica, who completed a checklist of developmental benefits (Žižak et al, 2001), while Bennion and Adams (1986): Revised Extended Version of the Objective Measure of Ego Identity Status EOM -EIS-II) was used for measuring the statuses of interpersonal identity. The results show that there are significant differences between the identity statuses of all dimensions of interpersonal identity and internal and external benefits in a way that in a young person's life developmental benefits are much more present than any of the statuses of interpersonal identity ($p=.000$). Research has shown that there is a negative correlation between the constructive use of time and the diffusion and moratorium in the dimension of friendship ($p=.010$).

Given that the results showed that young people live more in presence of developmental benefits than of functional, even dysfunctional identity statuses, the results of the research point the need for a deeper study of identity statuses, given that with the identity achievement adolescents are more confident and invest more in their environment and relations with others. It is obvious that the presence of developmental benefits is not sufficient to answer the challenges of identity formation period.

*Key words: interpersonal identity, adolescence,
developmental assets*

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Pretpostavke integracije teorije, istraživanja i prakse u oblasti razvojne prevencije poremećaja ponašanja

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Razvojna prevencija, kao kontinuirani i aktivni proces redukovanja rizičnih i jačanja protektivnih faktora u cilju stvaranja uslova za pozitivan razvoj dece i omladine, predstavlja vodeći pristup u oblasti prevencije poremećaja ponašanja. Visok nivo razvijenosti, povezanosti i međusobne usaglašenosti savremenih dostignuća teorije, istraživanja i prakse u ovoj oblasti predstavlja bazičnu pretpostavku efektivnosti celokupnog sistema preventivnog delovanja. Drugim rečima, naučna zasnovanost prakse razvojne prevencije, izražena kroz njenu utemeljenost na empirijski potvrđenim teorijskim modelima i rigorozno evaluiranim preventivnim strategijama i intervencijama, jedan je od ključnih principa planiranja efektivnih programa prevencije poremećaja ponašanja.

Polazeći od činjenice da razvojnu prevenciju, u našim uslovima, odlikuje izraženi raskorak između nauke i prakse, te da je neophodno zalaganja naučnika usmeriti na pojačano uvođenje teorijskih i istraživačkih dostignuća u praktično preventivno postupanje, u radu će biti ukazano na najvažnije pretpostavke uspešne integracije teorije, istraživanja i prakse razvojne prevencije. Posebna pažnja biće usmerena na značaj sprovođenja epidemioloških istraživanja incidence i prevalencije poremećaja ponašanja i zastupljenosti rizičnih i protektivnih faktora; potrebu uvažavanja epidemioloških na-

laza prilikom planiranja preventivnih programa i selekcije ciljne populacije; značaj razvijanja sistema kontinuiranog monitoringa poremećaja ponašanja i rizičnih i protektivnih faktora u zajednici; opravdanost pojačanog evaluiranja preventivnih programa i intervencija; nužnost kreiranja registra evaluiranih i potvrđeno efektivnih preventivnih intervencija; uključujući i značaj uspostavljanja dogovora o standardima efektivnosti koji bi bili osnova identifikacije i selekcije preventivnih intervencija vrednih diseminacije. Dodatno, biće ukazano na mogućnosti razvijanja infrastrukture organizacija koje mogu biti resursi u primeni naučno-zasnovane metodologije procene, planiranja, implementacije i evaluacije u oblasti prevencije, kao i potrebu za izraženijim propagiranjem korišćenja naučnih metoda i empirijski evaluiranih intervencija u praktičnom preventivnom radu.

Uvažavanje ovih pretpostavki, čijoj promociji bi naučna javnost trebalo intenzivno da se posveti, direktno bi bilo u funkciji podsticanja procesa naučnog zasnivanja razvojne prevencije, a time i povećanja njene efektivnosti na planu onemogućavanja nastajanja, razvijanja i održavanja poremećaja ponašanja dece i omladine.

Ključne reči: razvojna prevencija, nauka o prevenciji, poremećaji ponašanja

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Assumptions of theory, research and practice integration in developmental prevention of behavior problems

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Developmental prevention defined as a continuous and active process of reducing the impact of risk factors and strengthening the impact of protective factors, that has the goal of creating conditions for positive youth development, represents the leading approach in the area of Prevention of Behavior Problems. High level of development, connection and coherency of contemporary theory, research and practice in this area, represent the fundamental assumption of an effective comprehensive system of prevention. In other words, science-based practice of developmental prevention, based on empirically confirmed theoretical models and rigorous evaluation of prevention strategies and intervention, is one of the key principles for planning effective behavior problems prevention programs.

Given the fact that there is a huge gap between theory and practice in developmental prevention in or conditions, and that it is necessary to direct efforts of scientists for integration of theoretical and research results in the prevention practice, the paper will focus on the most important assumptions for successful integration of theory, research and practice of developmental prevention. Special attention will be given to: the importance of epidemiological research on incidence and prevalence of behavior problems and research on the presence of risk and protective factors; the need

for recognition of epidemiological results derived from the process of planning prevention programs and from the target group selection; the importance of development of continuous monitoring system that tracks risk and protective factors and behavior problems; the justification of enhanced evaluation of prevention programs and interventions; the necessity to create a register of effective prevention interventions that are evaluated and proven; the significance of creating consensus on effectiveness standards that would serve as a basis for identification and selection of prevention interventions and which would be reliable for dissemination. Additionally, the paper will point out possibilities for development of infrastructures of organizations which could serve as resources for the application of science-based methodology of assessment, planning, implementation and evaluation in the area of prevention, and the paper will also point out the need for advocating the utilization of scientific methods and empirically evaluated interventions in prevention practice.

Taking these assumptions into account, to which scientific community should be more committed, could serve for the purpose of encouraging the process of scientific foundation of developmental prevention, and would increase its effectiveness in the area of preventing the formation, development and persistence of behavior problems in youth population.

Key words: developmental prevention, prevention science, behavior problems

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Razlozi činjenja krivičnog dela mladih sa aktivnim poremećajima u socijalnom ponašanju

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U savremenoj socijalnopedagoškoj literaturi, razlozi činjenja krivičnih dela mladih se, veoma retko, proučavaju iz perspektive mladih sa aktivnim poremećajima u socijalnom ponašanju. Cilj našeg istraživanja je bio da se sagledaju razlozi zašto su mladi koji imaju aktivne poremećaje u socijalnom ponašanju učinili krivično delo, odnosno da se ovaj problem razmotri iz perspektive ovih mladih koji su u pedagoškom i svakom drugom diskursu pozicionirani kao neuspešni. Ovi mladi imaju svoje teorije o sopstvenom ponašanju i razlozima svojih postupaka koje proveravaju i preispituju, koje mogu, ali ne moraju da budu u skladu sa teorijama koje o njihovom ponašanju imaju „značajni drugi”. U istraživanju su primenjene kvalitativne i kvantitativne tehnike procene konstruisanja. Konkretnije, primenjena je metodološka aparatura koja se koristi u teoriji ličnih konstrukata, a u ovom prikazu predstaviće se rezultati iz tehnike polustrukturisanog intervjua i to pitanja koja se tiču kako mladi razumeju zašto su počinili krivično delo. Sa tim u vezi, predstaviće se analiza 20 odgovora mladih sa aktivnim poremećajima u socijalnom ponašanju u vezi sa razlozima učinjenog krivičnog dela. Na osnovu analize rezultata moguće je zaključiti da ispitanici veruju da su spoljašnji činoci doprineli činjenju krivičnog dela, kao što je uticaj vršnjaka, nedostatak novca, uticaj sredstava zavisnosti, višak slobodnog vremena.

Nalaz koji zaslužuje posebnu pažnju predstavlja nepostojanje izbalansiranog odnosa i analiza realnog konteksta kao i sopstvenog doprinosa situaciji. Rezultati ove analize podupiru subjektivni pristup aktivnim poremećajima u socijalnom ponašanju, te od tih činilaca treba krenuti u razvijanju mreža socijalne podrške.

Cljučne reči: konstruktivistički pristup, krivična dela, mladi sa aktivnim poremećajima u socijalnom ponašanju

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Reasons for committing criminal deeds in youth with social behavioural disorders

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In contemporary social pedagogical literature, reasons for committing criminal deeds are rarely studied from the perspective of youth with active social behaviour disorders. The goal of the research was to examine the reasons of youth with active social behaviour disorders for committing criminal deeds, that is, to view this problem from the perspective of these young people who have been positioned, in pedagogical and every other discourse, as unsuccessful. These young people have their personal theories about their behaviour and reasons behind their actions which they examine and question. These may or may not be in concordance with the theories other „significant” parties have about the matter. This research applied qualitative and quantitative research techniques for personal construct assessment. More specifically, the techniques used are methodological resources used in personal construct theory. This particular demonstration will display the results of the techniques of semi-structured interview comprised of questions regarding young people’s understanding of the reasons for committing criminal deeds. Bearing this in mind, we will present the analysis of 20 answers of youth with active social behaviour disorders and their reasons for committing criminal deeds. Based on the results of the analysis it is possible to conclude that the participants believe

that external factors contributed to committing the criminal deed. Those factors include peer pressure, lack of financial means, influence of mind altering substances, and excess of free time. The findings which deserve closer analysis are the lack of balanced relations and realistic context, as well as personal contribution to the situation. The results of this analysis support individual approach to active social behaviour disorders and thus comprise the starting point in developing the network of social support.

Key words: constructivist approach, criminal deeds, young with active social behaviour disorders.

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*Poremećaji ponašanja, delinkvencija i kriminal:
Tretman i prevencija recidiva*

*Behavioral disorders, delinquency and crime:
Treatment and relapse prevention*

Kućni zatvor – kazna ili privilegija

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Novelom Krivičnog zakonika iz 2009. godine u domaće krivično zakonodavstvo je uvedena mogućnost alternativnog izvršenja kazne zatvora u prostorijama u kojima osuđeni boravi, sa ili bez elektronskog nadzora. Namera zakonodavca da rastereći prenaseljene zavodske ustanove, smanji troškove izvršenja i otkloni štetne efekte kazne zatvora, naišla je, međutim, na opravdane kritike stručnjaka koji su veoma brzo otkrili pukotine na ovoj pravnoj konstrukciji. Mnogi autori su ukazali na nelogičnosti i nedorečenost zakonskih odredbi kojima je regulisan postupak primene „kućnog zatvora“. Izmenama i dopunama krivičnopravne regulative iz 2011. i 2012. godine ispravljeni su pravno-tehnički i logičko-jezički propusti prethodnih rešenja, ali nisu otklonjene sve nejasnoće u pogledu karaktera ovakvog načina sankcionisanja. Da stvari budu komplikovanije (ili jednostavnije), u radnoj verziji novog Zakona o izvršenju krivičnih sankcija nema odredbi o postupku izvršenja kazne zatvora u prostorijama u kojima osuđeni boravi, niti pomena kućnog zatvora. Celokupna materija izvršenja kućnog zatvora, sada sa punopravnim nazivom, našla se u radnom tekstu novog Zakona o probaciji u izvršenju vanzavodskih sankcija i mera. U međuvremenu, nekoliko poznatih slučajeva primene kućnog zatvora izazvalo je kontroverzne komentare u stručnoj i laičkoj javnosti. Da li je kućni zatvor modalitet izvršenja kazne za-

tvora kojim se efikasno ostvaruje svrha kažnjavanja ili privilegija koja omogućava pojedincima udobniji režim izdržavanja kazne? U ovom radu je dat kratak pregled „pravnog putešestvija“ kućnog zatvora, uz kritičku analiza njegovih prednosti i nedostataka, kako sa legislativnog aspekta, tako i sa stanovišta njegove praktične primene.

*Ključne reči: kazna zatvora, kućni zatvor,
elektronski nadzor*

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House arrest – punishment or privilege

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The 2009 amendments to the Criminal Code introduced an innovation in our criminal legislation – a possibility of execution of prison sentence in the residence of the convicted, with or without electronic monitoring. The intention of the legislator to relieve the pressure to overcrowded prisons, reduce the costs of enforcement and remedy adverse effects of imprisonment, has faced, however, justified criticism from experts who quickly discovered cracks in this legal construction. Many authors have pointed to inconsistencies and incompleteness of the legal provisions regulating the procedure of applying „house arrest”. Amendments to the criminal law in 2011 and 2012 corrected legally-technical and logical-language omissions of previous statutes, but they did not eliminate all uncertainties regarding the nature of this way of sanctioning. To make matters more complicated (or simpler), the draft of the new Law on Enforcement of Penal Sanctions does not contain any provision on the execution of prison sentence in the residence of the convicted, nor mention house arrest. The whole matter of the execution of house arrest, now with rightful name, is included in the draft of the new Law on Probation in the Execution of Non-Custodial Sanctions and Measures. Meanwhile, several known cases of house arrest sparked controversial comments in the professional and lay public. Is house arrest modality of

prison sentence that effectively achieves the purpose of punishment or a privilege that allows individuals more comfortable regime of sanctioning? This paper provides a brief overview of the „legal journey” of house arrest with a critical analysis of its advantages and disadvantages, both from a legislative point of view, and in terms of its practical application.

*Key words: prison sentence, house arrest,
electronic monitoring*

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Tretman osuđenih sa invaliditetom u zatvoru

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Prema studijama Svetske zdravstvene organizacije, invaliditet nastaje kao posledica povreda i nasilja u četvrtini slučajeva. Zatvorenici sa invaliditetom čine posebno ugroženu grupu. Malobrojna su istraživanja koja se bave njihovom situacijom i posebnim potrebama. Nije poznat ni precizan broj osuđenih sa invaliditetom. Porastom zatvorske populacije u većini zemalja i povećanjem broja starijih zatvorenika, došlo je do rasta broja ljudi sa invaliditetom u zatvorima. Prema podacima United Nations Development Programme, 80% osoba sa invaliditetom živi u siromašnim zemljama u razvoju. Teškoće sa kojima se osobe sa invaliditetom suočavaju u društvu su uvećane u zatvorima. Na to utiče zatvoreno, ograničavajuće okruženje i nasilje u zatvorima, prekoračenje optimalnih kapaciteta, psihološki stres i nedostatak adekvatne medicinske nege. Dovodi se u pitanje poštovanje ljudskih prava i ugrožavanje statusa zatvorenika sa invaliditetom. Posledice takvog stanja su učestali apeli u pravcu razvoja politike i strategija za smanjivanje zatvaranja prestupnika sa invaliditetom i paralelnog prilagođavanja zatvorskog tretmana potrebama ove ranjive grupe. U cilju ostvarenja ravnopravnog tretmana zatvorenika sa invaliditetom, zatvorske vlasti moraju razvijati politiku i strategije koje se bave potrebama ove ranjive grupe u zatvorima. Posebna pažnja mora biti posvećena pitanjima obuke zatvorskog osoblja za

rad sa ovom kategorijom, klasifikacije, smeštaja, zdravstvena zaštite, pristupa programima i uslugama, bezbednosti, priprema za oslobađanje, uslovne slobode i pomilovanja osoba sa invaliditetom u zatvoru.

Ključne reči: tretman, osuđeni, invalidi, zatvor

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Treatment of convicts with disabilities in prison

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According to the World Health Organization, a disability is a result of injuries and violence in a quarter of cases. Prisoners with disabilities are a particularly vulnerable group. Only few studies deal with their situation and particular needs. The exact number of prisoners with disabilities is not known. The increase in prison population in most countries and the increasing number of older prisoners have led to an increase in the number of people with disabilities in prisons. According to the United Nations Development Program, 80% of disabled people live in poor developing countries. Difficulties that people with disabilities face in society are even bigger in prison due to a closed, restrictive environment and violence in prisons, exceeding optimum capacity, psychological stress, and lack of adequate medical care. Respect for human rights and the endangered status of prisoners with disabilities are thus brought into question. The consequences of this situation are frequent appeals toward the development of policies and strategies to reduce the imprisonment of offenders with disabilities and parallel adaptations of prison treatment to the needs of this vulnerable group. In order to achieve equal treatment of disabled prisoners, prison authorities must develop policies and strategies that address the needs of vulnerable groups in prisons. Special attention must be paid to

the issues of training prison staff to work with this group, classification, housing, health care, access to programs and services, security, pre-release, probation and parole of persons with disabilities in prison.

Keywords: treatment, convicts, disabled, prison

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Izmeštanje kriminala – kritika činjenja¹

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Jedna od prvih i najupornijih kritika situacione prevencije je izmeštanje kriminala. Neželjene posledice primenjenih intervencija u pravcu izmeštanja kriminala predstavljaju relociranje kriminala sa jednog prostora, vremena, mete (žrtve), taktike ili vrste krivičnog dela. Autori prepoznaju „dobročudno” i „zločudno” izmeštanje kriminala. Čak i totalno izmeštanje može biti socijalno poželjno. Do dobroćudnog izmeštanja dolazi ukoliko se izvrši lakše krivično delo ili isto delo sa lakšim posledicama po zajednicu (izbegnuta reviktimizacija, naseljena mesta, mesta sa velikom koncentracijom kriminala, zaštićene ranjive grupe). Zločudno izmeštanje predstavlja vršenje težih dela od prvobitno preveniranih ili istih dela, ali sa mnogo težim socijalnim posledicama. Difuzija dobiti predstavlja bonus efekat izmeštanja kriminala, odnosno dobit bez uloženi resursa. Na primer, ostvareni su pozitivni efekti u blizini mesta gde su se intervencije sprovodile ili su preventivne intervencije targetirale jedno krivično delo, a došlo je do efekata u redukciji nekog drugog. Smatra se da difuzija dobiti u osnovi sadrži dva mehanizma: zastrašivanje i obeshrabrivanje.

Rezultati retkih evaluacionih studija koje sadrže podatke o izmeštanju ukazuju da je ono svakako manje od prethodno ostvarene dobiti primenom situacionih intervencija. Istraživački nalazi ukazuju na to da izmeštanje zavisi od motivacije i iskustava

prestupnika i prilike za zločin. Prema tome, prestupnici se najčešće opredeljuju za lokacije ili žrtve u njihovoj blizini, zbog procene većeg rizika i napora u okruženju koje im nije poznato. Rezultati istraživanja usmerenih na detekciju izmeštanja i difuzije dobiti, pokazuju da su oni prilično ujednačeni. Kao najučestalije izdvaja se vremensko izmeštanje kriminala i prostorna difuzija dobiti. Istraživanja izmeštanja trgovine drogom i prostitucije pokazuju mnogo veću difuziju dobiti, nego što je to efekat izmeštanja.

Međutim, izmeštanje kriminala se može predvideti pri planiranju intervencija i predstavljati dobro manipulativno oruđe u kontroli kriminala.

*Ključne reči: situaciona prevencija, izmeštanje
kriminala, difuzija dobiti*

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1 Rad je nastao u okviru projekta „Kriminal u Srbiji: fenomenologija, rizici i mogućnosti socijalne intervencije“ (2011-2014), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije (broj 47011).

Crime displacement – action criticism¹

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Crime displacement is the first and one of the most persistent criticisms of situational crime prevention. Unintended consequences of the implemented interventions towards crime displacement involve relocation of crime to a different space, time, target (victim), tactics and crime type. The authors recognize benign and malign crime displacement. Even total crime displacement can be socially desirable. Benign crime displacement occurs when the displacement of crime is less serious or equally serious but less impactful for the community (revictimization of crime prevented, crime is moved from residential area, areas with high concentration of crime, or from vulnerable groups of population). Malign displacement occurs when a perpetrator commits more serious offenses, or the same or similar offenses with more serious social consequences. Diffusion of benefits is a bonus effect of crime displacement, a benefit without resources involved. For example, positive effects could be achieved close to the place where interventions are implemented, or involved with more types of crime than it's been targeted. It is considered that diffusion of crime consists of two mechanisms: deterrence and discouragement.

Results of rare evaluation studies which involve data about crime displacement show that the displacement is less than the benefits achieved by the implementation of situational intervention. Research

results show that crime displacement depends on the perpetrators' motivation, experience and crime opportunity. Consequently, perpetrators mostly choose location and victims in their surroundings, because of the higher risk and effort in unfamiliar places. Research designed to identify crime displacement and diffusion of benefits detection, show that their effects are pretty much balanced. The most common is time crime displacement and space diffusion of benefits. Displacement of drug trafficking and prostitution is less than diffusion of benefits.

However, crime displacement could be predicted in designing interventions, and consequently be a good manipulative crime control tool.

Keywords: situational prevention, crime displacement, diffusion of benefits

1 This paper is a result of the project "Crime in Serbia: phenomenology, the risks and opportunities of social intervention" (2011-2014), which was financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia (No. 47011).

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Primena sistemske porodične terapije u tretmanu antisocijalnog poremećaja ličnosti

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Skoro dva veka prisutna su neslaganja stručnjaka u pokušajima definisanja poremećaja ličnosti, a posebno antisocijalnog poremećaja. Tako danas imamo veliki broj različitih dijagnostičkih kriterijuma, ali i terminoloških određenja, kao što su antisocijalni i disocijalni poremećaj ličnosti, psihopatija, sociopatija i slično. Međutim, ono što je zajedničko u svim određenjima jesu osnovne karakteristike ljudi sa ovim poremećajem, a to su: agresivnost, iritabilnost, nemogućnost kontrole besa, nepoštovanje normi (moralnih, društvenih, pravnih), manipulativnost, grabežljivost, nedostatak odgovornosti i osećanja krivice, lažljivost itd. Jasno je da pojedinci sa ovakvom strukturom ličnosti stvaraju veliki broj različitih problema na ličnom, porodičnom i širem socijalnom planu.

U tretmanu ovog poremećaja, pored psihoanalize i psihoanalitičke psihoterapije, koristi se i veoma širok dijapazon individualnih i grupnih psihoterapijskih modaliteta.

Sistemska porodična terapija ima značajno mesto u tretmanu poremećaja ličnosti. Sa akcentom na njenu sistemsku orijentaciju, ova vrsta terapije nije toliko fokusirana na karakteristike pojedinaca, već je fokus na interakcijama i odnosima između članova porodice. Naučeni obrasci prevazilaženja problema i stresa jesu rezultat kompleksne interakcije indivi-

dualne biološke konstitucije i socijalnog potkrepljivanja, koja kasnije formira crte ili strukturu ličnosti.

Imajući u vidu da rani porodični odnosi imaju odlučujući uticaj na formiranje strukture ličnosti, cilj ovog rada je da ukaže na nužnost sagledavanja antisocijalnog poremećaja ličnosti kao relacijskog i transgeneracijskog problema, kao i na neophodnost tretmana na ovim osnovama. Problem treba rešavati – tretirati u okvirima u kojima nastaje i /ili u kojima ima najveće posledice. Upravo se stoga sistemski porodičan pristup nameće kao nužan u terapiji i tretmanu ovih pojedinaca.

Ključne reči: antisocijalni poremećaj ličnosti, psihopatija, tretman, Sistemska porodična terapija

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Application of systemic family therapy in the treatment of antisocial personality disorder

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Disagreements of experts in an attempt to define personality disorders, especially antisocial personality disorder, have existed for almost two centuries. Therefore, nowadays we have a number of different diagnostic criteria, highly developed terminology and definitions, such as antisocial and dissocial personality disorder, psychopathy, sociopathy, etc. Basic characteristics of people with this disorder are common to all definitions, such as: aggression, irritability, inability to control anger, contempt towards norms (moral, social, legal), manipulation, greed, lack of responsibility and guilt, mendacity, etc. It is clear that individuals with this personality structure create a number of problems at individual, family and wider social level.

In addition to psychoanalysis and psychoanalytic psychotherapy, a wide range of individual and group psychotherapy modalities is used for treatment of this disorder.

Systemic family therapy plays a significant role in the treatment of personality disorders. With its emphasis on systemic orientation, this type of therapy is not so much focused on the characteristics of individuals, but on the interactions and relationships between family members. The learned patterns to overcome the problems and stress are the result of complex interaction of individual biological constitution and

social corroboration, which later form personality traits or structure.

Considering that early family relationships have a decisive influence on the formation of personality structure, the aim of this paper is to point out the necessity of perceiving antisocial personality disorder as relational and transgenerational issue, as well as the necessity of the treatment based on this ground. The problem is to be solved within the frame it occurred and / or within the frame where the greatest consequences are. Therefore systemic family approach establishes itself as a necessity in therapy and treatment of these individuals.

*Keywords: antisocial personality disorder,
psychopathy, treatment, systemic family therapy*

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Korektivne intervencije u tretmanu osuđenih lica

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Polazeći od nekonzistentne i neujednačene primene obilja korektivnih intervencija koje u radu sa osuđenima primenjuju naši praktičari, većinom specijalni pedagozi, ali i od sagledavanja efikasnog sprovođenja tretmana osuđenih u međunarodnim okvirima, pristupilo se izradi ovog rada u cilju istovremenog pružanja podrške i odgovora na izazove koje nude aktuelni trendovi Strategije razvoja sistema izvršenja krivičnih sankcija u R Srbiji.

Osnovni cilj rada je teorijski, jer se odnosi na kritičku analizu postojeće literature u vezi sa primenom, osmišljavanjem i promocijom efektivnih korektivnih intervencija u tretmanu osuđenih lica. Okrenutost naučno priznate prakse rehabilitativnim koncepcijama u radu sa osuđenima je opredelilo i teorijsku osnovu ovog rada.

Samo određenje predmeta rada je proizašlo iz logičnih zaključaka da tretman osuđenih lica počiva na empirijskoj osnovi i da bi trebao zadovoljiti osnovne naučne kriterijume kako bi njegova primena dobila kvalitet u pogledu efektivnosti.

U radu će se zato analizirati inostrani i domaći naučni izvori u vezi sa primenom korektivnih intervencija u tretmanu osuđenih lica. Eklektički pristup i multimodalnost formi rada koje se primenjuju sa osuđenima nude obilje korektivnih intervencija koje

se moraju sagledati kroz vizuru naučne opravdanosti njihove primene u praksi. Zbog potreba prakse za jasnom strukturom tretmana osuđenih lica, pribićiće se naučno-sistematizovanom pregledu, ali i napraviti pokušaj osmišljavanja i promocije efektivnih korektivnih intervencija u radu sa osuđenima.

Ključne reči: korektivne intervencije, tretman, osuđena lica

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Corrective interventions in offenders' treatment

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Starting from inconsistent and uneven application of numerous corrective interventions in working with offenders, which our practitioners, mostly special educators apply, and also from the consideration of effective offenders' treatment implementation in the international framework, the aim of this paper is to simultaneously support and respond to the challenges offered by current trends in the Development Strategy of prison system in the Republic of Serbia.

The main aim of this paper is theoretical, as it relates to critical analysis of the existing literature regarding the application, design and promotion of effective corrective interventions in the treatment of offenders. The orientation of scientifically recognized practice to rehabilitative concepts in working with offenders determined the theoretical basis of this paper.

The topic of this paper has derived from the logical conclusion that treatment of offenders has an empirical basis and that it should meet basic scientific criteria so that its implementation becomes effective.

The paper will therefore analyze foreign and domestic sources of research related to the application of corrective interventions in the treatment of offenders. The eclectic approach and multimodality

of forms that are applied to convicts offer plenty of corrective interventions which should be seen through the eyes of scientific justification of their practical usage . Due to the need for clear structure of offenders' treatment in practice, we will present a scientific-systematic review, but also make an attempt to develop and promote effective corrective interventions in working with offenders.

Key words: corrective interventions, treatment, offenders

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Odustajanje od kriminalnog ponašanja – najznačajnije teorijske koncepcije

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Izlaganja u radu su posvećena prikazivanju najznačajnijih teorijskih koncepcija o trajnom odustanku od kriminalnog ponašanja. Teorije se dele na one koje primat daju socijalnim činiocima i sazrevanju, one koje nalaze da su individualne karakteristike od presudnog značaja i one koje stoje pri tvrdnji da je odustanak od kriminalnog ponašanja uslovljen ličnom odlukom i postojanjem odgovarajućih objektivnih preduslova. Kada je reč o maloletnim prestupnicima jedna od najpoznatijih teorija je delo T. Moffitt, koja zaključuje da maloletnici spontano odustaju od kriminalnog ponašanja u kasnijim godinama adolescencije, što ne važi samu u slučaju maloletnika-perzistentnih prestupnika čiji psihološki profil odlikuju određene patološke karakteristike. Koncipirano je mnoštvo teorija koje naglašavaju značaj socijalnih činilaca, kao što su postojanje zdravih i čvrstih socijalnih kontakata, bliski porodični odnosi, stupanje u emotivne veze i brak, pronalaženje zaposlenja, roditeljstvo, nastavak školovanja i slično (Sampson i Laub, Matza, Maruna, Farrell i drugi). No, ni ove koncepcije ne poriču činjenicu da na različite ljude isti socijalni činioci deluju na različite načine. Teorijske koncepcije stoga ukazuju na to da se odgovori ne mogu tražiti isključivo u utvrđivanju pozitivnih i negativnih korelacija između odustanka od kriminalnog ponašanja i pojedinih socijalnih i ličnih faktora. Naprotiv, čini se da je kvalitativno

istraživanje i iscrpno upoznavanje pojedinosti konkretnih slučajeva od daleko većeg značaja. Stoga se stručnjaci sve više okreću tzv. narativnim studijama i studijama slučajeva, te je jedna od posebno bitnih studija Liverpolska studija Shadd Marune, o kojoj će takođe biti reči.

Ključne reči: odustanak od kriminalnog ponašanja, maloletni prestupnici, perzistentni prestupnici

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Desistance from crime – Review of literature

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The paper reviews the literature on the topic of desistance from crime. All theories can be divided into the ones that accentuate the significance of social factors and the process of maturation, ones that emphasize the individual characteristics, and ones that combine individual traits and social circumstances. When it comes to juvenile offenders, probably the best known theory is „the dual taxonomy of offending behavior” by T. Moffitt, which states that juvenile offenders spontaneously give up crime later in adolescence, although this is not the case with persistent juvenile offenders whose psychological profile is characterized by specific pathological features. On the other hand, there is an abundance of theories that emphasize the importance of social factors, such as the existence of healthy and strong social contacts, close family relationships, engaging in emotional relationships and marriage, finding employment, parenting, continuing education, etc. (Sampson and Laub, Matza, Maruna, Farrell etc.) However, even those conceptions do not deny the fact that sometimes people act in different ways regardless of external circumstances. Theoretical concepts therefore suggest that the answer cannot be sought exclusively in determining the positive and negative correlation between desistance from crime and certain social and personal factors. On the contrary, it seems that the qualitative research

and exploration of the details of specific cases are of a far greater importance. Thus, experts are turning to the so-called narrative studies. With this in mind, the paper will present main results of The Liverpool study by S. Maruna.

*Keywords: desistance from crime, juvenile offenders,
persistent offenders*

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Unapređivanje procesa resocijalizacije osuđenih lica kroz legislativno pozorište

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Legislativno pozorište, kao forma teatra potlačanih, zasniva se na korišćenju tehnika primenjenog pozorišta u cilju pružanja mogućnosti građanima, u najširem smislu te reči, da iznesu sopstvena mišljenja i stavove o postojećoj legislativi u određenoj oblasti društvenog života i sugerišu izmene koje bi unapredile položaj onih na koje se legislativa direktno odnosi. Drugim rečima, legislativno pozorište predstavlja sredstvo koje omogućava uspostavljanje dijaloga između institucija koje utiču na kreiranje zakonodavne politike i samih građana. Iako legislativno pozorišta ima relativno dugu tradiciju u zapadno-evropskim i američkim zemljama, u našim uslovima se ova forma primenjenog pozorišta do skora nije primenjivala.

Uvažavajući potencijal primene legislativnog pozorišta u oblasti izvršenja krivičnih sankcija, Centar za pozorišna istraživanja ApsArt, u partnerstvu sa Komitetom pravnika za ljudska prava i Beogradskim centrom za ljudska prava, uz podršku kancelarije Zaštitnika građana, započeo je aprila 2013. godine, realizaciju projekta „Od kršenja do stvaranja zakona”. Cilj ovog projekta, zasnovanog na postavkama legislativnog pozorišta, ogleda se u omogućavanju osuđenim licima da, kroz pozorišne radionice, opišu svoj položaj i ukažu na probleme sa kojima se suočavaju tokom izdržavanja zatvorske kazne, a zatim,

kroz forum predstavu, predlože izmene postojećih ili uvođenje novih odredbi Zakona o izvršenju krivičnih sankcija i time utiču kako na proces unapređivanja zakonodavne regulative u ovoj oblasti, tako i na efektivnost njene primene. Projekat se sprovodi u zatvorima i kazneno-popravnim zavodima u Republici Srbiji, uz planirano učešće više od četiri hiljade osuđenih lica.

U radu će, pored prezentacije metodologije i načina realizacije projektnih aktivnosti, biti saopšteni dosadašnji rezultati projekta izvedeni u formi zaključaka o ključnim oblastima u kojima osuđena lica nailaze na teškoće i problemima sa kojima se susreću tokom izdržavanja zatvorske kazne.

Ključne reči: legislativno pozorište, teatar potlačenih, osuđena lica, krivične sankcije

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Improving resocialization process of offenders through legislative theatre

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Legislative theatre, as a form of Theatre of the oppressed, is based on the use of applied theatre techniques to provide community members with the opportunity, in the broadest sense of the word, to express their own opinions and views on existing legislation in a particular area of social life and to suggest changes that would improve the position of those who are under the influence of that legislation. In other words, the legislative theatre is a tool which allows dialogue between institutions that influence the creation of legislative policy and citizens. Although legislative theatre has a relatively long tradition in Western European and American countries, in our conditions this form of applied theatre was not applied until recently.

Recognizing the potential of legislative theatre in the field of criminal sanctions, Centre for Theatre Research ApsArt, in partnership with the Lawyers' Committee for Human Rights and the Belgrade Centre for Human Rights, with the support of the Office of the Ombudsman, started the implementation of the Project „From Law Breaking to Law Making” in April 2013. The project is based on the assumptions of legislative theatre, and is reflected in enabling prisoners, through theatre workshops, to describe their position and to identify the problems that they face while serving a prison sentence, and then,

through the forum theatre, to propose changes of the existing provisions or introducing new ones to the Law on Execution of Criminal Sanctions, and thus affect both the process of improving the legislation in this area, and the effectiveness of its implementation. The project is being implemented in prisons and correctional institutions in the Republic of Serbia, and the plan is to include more than four thousand prisoners.

In this paper, beside the presentation of the Project methodology and implementation, the results of the project will be presented in the form of conclusions of key areas in which prisoners face difficulties and problems while they serve a prison sentence.

Key words: legislative theatre, theatre of the oppressed, offenders, criminal sanctions

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Neadekvatna zakonodavna reakcija na maloletne prestupnike evidentirane sa prezaštićujućim vaspitnim stilom roditelja

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Istraživanje smo sprovedi radi sagledavanja i preveniranja pojave maloletničkog prestupništva u našoj sredini u korelaciji sa najviše zastupljenim faktorima rizika. Takođe, proveravali smo kompatibilnost sudskih vaspitnih mera i vansudskih socijalnih mera sa potrebama maloletnih delinkvenata u našoj sredini. Ovo istraživanje doprinosi unapređenju stručne prakse u Centrima za socijalni rad, ali i šire, doprinosi unapređenju zakonodavne regulative u oblasti postupanja prema maloletnim delinkventima. Uzorak čine maloletni prestupnici koji su evidentirani u Centru za socijalni rad Stara Pazova tokom 2012. godine. Analizom dokumentacije Centra o maloletnim prestupnicima prikupljeni su podaci o zastupljenosti rizičnih faktora i primenjenim socijalno-zaštitnim uslugama i merama. Urađena je i analiza sadržaja i svrhe vaspitnih mera koje su predviđene Zakonom o maloletnim učinocima krivičnih dela. Rezultati istraživanja ukazuju da su u uzorku u najvećem procentu (61,11%), zastupljeni maloletni prestupnici koji potiču iz porodica sa prezaštićujućim vaspitnim stilom. Analizom sadržaja vaspitnih mera zaključili smo da ni jedna od predviđenih vaspitnih mera ne nalaže roditeljima korekciju prezaštićujućeg vaspitnog stila. Naše zakonodavstvo ne prepoznaje potrebu da zahteva korekciju roditeljskog vaspitnog stila. Zaključili smo da vaspitna mera pojačanog nadzora nije adekvatna za najveći broj maloletnih prestupnika, od

kojih su svi evidentirani sa prezaštićujućim vaspitnim stilom. Zaključili smo da vaspitna mera kao model reagovanja na maloletničko prestupništvo mora implicirati odgovornost roditelja u većoj meri nego do sada i mora naložiti promene na planu funkcionisanja i maloletnika i roditelja. Takav model bi imao snagu zakona i bio obavezujući, i nadalje doprineo bi efikasnijem radu Centara za socijalni rad i ostalih institucija u prevazilaženju problema maloletničke delinkvencije.

Ključne reči: vaspitne mere, pojačan nadzor, vaspitni stil

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Inadequate legal reaction to juvenile offenders coming from families with overprotective parenting style

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The aim of this research was to perceive and prevent the phenomenon of juvenile delinquency in our local environment in correlation with the most frequent risk factors. Also, we checked the compatibility of legal corrective measures and social measures with the needs of juvenile offenders in the local environment. This research contributes to the improvement of professional practice in the Center for Social Work, and also, it contributes to the improvement of legislation in the area of treatment of juvenile delinquents. The sample consists of juvenile delinquents that were recorded in our Center for Social Work during 2012. Data on the presence of risk factors and applied social and protective services and measures were collected by analyzing the Center's documentation. Analysis of the content and purpose of educational measures provided by Law on Juvenile Offenders has been done too. Research results indicate that the highest percentage of juvenile offenders in the sample – 61.11% come from families with overprotective parenting style. By analyzing the content of corrective measures we concluded that none of the designed corrective measures command the parents to correct their overprotective parenting style. Our legislation does not recognize the need for demanding the correction of parenting style. We concluded that the measure of increased supervision is inadequate for most juvenile offenders, all of whom are registered with

overprotective parenting style. We concluded that corrective measure as a model of reaction to juvenile delinquency must imply parental responsibility more than it has so far, and that it must demand changes in both juvenile and parent functioning. Such a model would have legal power, it would be obligatory, and further contribute to more effective work of Centers for Social Work, and other institutions in overcoming problems of juvenile delinquency.

Key words: corrective measures, increased supervision, educational style

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*Vaspitanje i obrazovanje osoba sa smetnjama i
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Educating persons with developmental disabilities

Institucionalna zaštita dece bez roditeljskog staranja

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U ovom preglednom radu cilj je da se ukaže na oblike zaštite dece bez roditeljskog staranja s posebnim osvrtom na reformske promene u sistemu institucionalne zaštite, te u okviru toga relevantne prakse kada su u pitanju deca sa ometonošću koja su ostala bez roditeljskog staranja. U uvodu, pažnja je posvećena pregledu međunarodnih i domaćih propisa i dokumenta koji regulišu osnovna prava dece bez roditeljskog staranja. Takođe, dat je kraći osvrt na razvoj oblika zaštite dece bez roditeljskog staranja u našoj zemlji. U posebnom delu rada analizirani su savremeni pravci i modeli sistema socijalne zaštite kod nas i u svetu, te je ukazano na efekte procesa de-institucionalizacije i transformacije ustanova u našoj sredini. Analizom ključnih prednosti i nedostataka institucionalnog smeštaja istaknuto je da određeni aspekti mogu biti i protektivni i rizični faktor u zavisnosti od potreba i karakteristika konkretnog deteta, ali i samog sistema, njegove organizacije i kompetencija zaposlenih da odgovore na konkretne potrebe dece i pruže im kvalitetnu socijalnu podršku. Kroz deskriptivni i kritičko-analitički pristup aktuelnog koncepta sistema socijalne zaštite dece sa teškoćama u razvoju ukazano je na mogućnosti i ograničenja novog modela socijalne zaštite i perspektivu „inkluzije” u institucionalnoj zaštiti. Opšti je zaključak autora da zaštita i podrška deci bez ro-

diteljskog staranja u institucijama ne može imati željene efekte ukoliko se ne učine neophodne promene u samoj organizaciji života, načinu rada s decom i sadržajima koji im se nude.

Ključne reči: deca bez roditeljskog staranja, institucionalna zaštita, deca sa teškoćama u razvoju, reforma socijalne zaštite

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Institutional protection of children without parental care

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The aim of this paper is to highlight the forms of childcare, with special reference to welfare reform in the institutional care, and the relevant practice when it comes to children with disabilities who are left without parental care. The introduction deals with national and international laws and documents that regulate the fundamental rights of children without parental care. A brief overview of social reaction to children without parental care in our country is also presented. Separate part of the paper analyzes modern trends and models of social welfare in our country and abroad, and points out the effects of the actual process of de-institutionalization and transformation of residential accommodation in our country. The analysis of key advantages and disadvantages of residential accommodation indicates that certain aspects can be both protective and risk factors depending on the specific needs and characteristics of the child, and also on the system itself, its organization and employees' competence to meet the specific needs of children and provide them with good social support. Descriptive and critical-analytical approach to the current concept of social protection of children with disabilities, point out the possibilities and limitations of a new model of social protection and the prospect of „inclusion” in

institutional care. The authors' general conclusion is that the protection and support of orphans in institutions may not have the desired effects unless the necessary changes in the organization of life, ways of working with children and the facilities offered to them are introduced.

Keywords: children without parental care, institutional care, children with disabilities, social welfare reform

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Participation of hearing-impaired student within the inclusive classroom

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Successful inclusion implies radical transformation of the society in all of its aspects. It is necessary to implement innovations in the educational system so that full participation of hearing-impaired students in the learning process can be enabled.

The aim of the research is to recognize the functioning of a hearing-impaired student within an inclusive classroom in order to overcome the barriers in his participation.

In order to have a broader insight into the subject, the research has a quantitative-qualitative character and represents applied action research and it is conducted in the natural context of the research phenomenon. The sample consists of a 2nd - grade student with moderate hearing impairment from a regular elementary school in Skopje. Two observations of the student's participation were made (initial, after a 3-month preparatory period, and final – 3 months after the initial). The main technique was the participatory observation realized through video samples made by 2 video cameras. Between the two observations, we had an active role in the process of giving instructions to the regular teacher to improve the student's participation in the learning process. The used instrument was a part of the standardized checklist for observing classroom participation of

hearing-impaired students. We made a comparison between the two observations to see if there is a difference, and we presented the data in frequencies.

In the second observation, the frequencies are higher in 5 out of 8 indicators: knowledge of classroom routines and handling transitions ($f_1=4$, $f_2=11$), following directions independently ($f_1=8$, $f_2=12$), attention of classroom instructions (50% of the time – $f_1=0$, $f_2=2$), comprehension of instructions (understands information that is familiar $f_1=11$, $f_2=18$) and responses and comments in lecture/teacher directed (correct and appropriate $f_1=8$, $f_2=10$).

The participation of the hearing-impaired student is improving due to the special educator's advising. This indicates the need of special educator's practice in regular schools whenever students with hearing impairments are included.

Key words: inclusive education, hearing-impaired student, participation

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Verbalna fluentnost kao prediktor uspeha u nastavi srpskog jezika i matematike kod dece sa lakom intelektualnom ometenošću¹

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Istraživanje je sprovedeno sa ciljem da se utvrdi odnos između verbalne fluentnosti i uspešnosti u oblastima srpskog jezika i matematike kod učenika sa lakom intelektualnom ometenošću.

Uzorkom je obuhvaćeno 60-oro dece sa lakom intelektualnom ometenošću (IQ 50-70; AS=59,88; SD=7,309), oba pola, uzrasta 10-14 godina. Analizom dokumentacije pedagoško-psihološke službe škola prikupljeni su podaci o uzrastu i intelektualnim sposobnostima ispitanika. Fonološka fluentnost procenjena je Testom kontrolisanih usmenih asocijacija, a semantička Testom kategorijalnog imenovanja. Kao osnovna varijabla za oba testa, upotrebljen je skor produktivnosti (ukupan broj ispravno produkovanih reči).

U statističkoj obradi rezultata su korišćeni Pirsonov i Spirmanov koeficijent korelacije i regresiona analiza.

Analizom rezultata je utvrđena statistički značajna povezanost između rezultata procene fonološke fluentnosti i uspešnosti u oblasti srpskog jezika ($p=0,005$) i matematike ($p=0,002$). Fonološka fluentnost zahteva upotrebu manje uobičajenih strategija, koje podrazumevaju značajniju aktivaciju egzekutivne kontrole. Semantička fluentnost, koja podrazumeva uobičajene strategije povezivanja leksičkih jedinica u smislaoni sistem i zavisi prvenstveno od lingvističke reprezentacije, se nije pokazala

kao značajan prediktor postignuća u posmatranim nastavnim oblastima. Dobijeni rezultati pokazuju da je kod dece sa lakom intelektualnom ometenošću mogućnost fleksibilne primene znanja, uslovljena korišćenjem efikasnih strategija, značajniji prediktor uspešnosti od naučenih pojmovnih kategorija.

*Ključne reči: laka intelektualna ometenost, verbalna
fluentnost, nastava*

1 Rad je proistekao iz projekta „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“, broj 179025 (2011-2014), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

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Verbal fluency as a predictor of achievement in language education and mathematics in children with mild intellectual disability¹

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The research was conducted with the aim to determine the relationship between verbal fluency and achievement in language education and mathematics in children with mild intellectual disability (MID).

The sample consisted of 60 children with MID (IQ 50-70; M=59,88; SD=7,309), of both genders, aged between 10 and 14. Data on age and intellectual abilities were acquired by analyzing the documentation obtained from pedagogical-psychological services.

Verbal fluency was assessed in phonemic and semantic domains. The phonemic fluency was assessed by adapted version of the Controlled Oral Word Association Test (COWAT), while the semantic fluency was assessed by the Category Naming Test (CNT). The productivity score (total number of correct words) was used as the basic variable in both tasks. The Pearson's and Spirman's coefficients of correlation, and regression analysis were used in the statistical analysis.

The result analysis showed presence of statistically significant relationship between the results of phonemic fluency assessment and the achievements in language education ($p=0,005$), and mathematics ($p=0,002$). Phonemic fluency requires the use of less common strategies, which involve more significant activation of executive control. Semantic fluency, which implies routine strategy of connecting

lexical items into a coherent system and primarily depends upon linguistic representation, did not prove to be a significant predictor of academic achievement in the observed educational areas. The obtained results indicate that possibility of flexible knowledge implementation, conditioned by usage of efficient strategies, is a more significant predictor of achievement than learned conceptual categories in children with MID.

Key words: mild intellectual disability, verbal fluency, language education, mathematics

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1 This article results from the project „Designig a Protocol for Assesing the Educational Potentials of Children with Disabilities as a Criterion for Development of Individual Educational Programs” (No. 179025), financially supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

Braille reading accuracy in students with visual disability¹

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Efficient Braille reading constitutes a highly specific and active haptic process. In essence, fingers, arms, even elbows contribute to Braille reading, whereas indices of both hands play a predominant role regarding the reading process. Accuracy is regarded to be one of the prevalent goals of literacy and it is construed as one of the three indicators of reading effectiveness for Braille and/or printed content. The present pilot study constitutes a preliminary process of a large-scale study, which investigates Braille reading accuracy in Greek students with blindness. The variable of Braille reading accuracy was examined in relation to students' gender, age at loss of vision and school grade, via the sub-scales of a standardized test (Test-A, Panteliadou & Antoniou, 2008). In total, 21 school aged blind students participated in the present study (11 were female, 11 were congenitally blind, and 11 were primary students). There was a statistically significant increase in errors of replacement in males compared to females ($t(19)=2.09$, $p<.05$). Participants in secondary education made significantly fewer errors of recognition ($t(19)=2.49$, $p<.05$), whereas congenitally blind participants made significantly more errors of addition ($t(19)=1.96$, $p<.05$). Although, female participants made more errors in total and congenitally blind participants made fewer, these differences however did not reach significance. Though the sample was too small to generalize

conclusions, this study suggests that listing and analyzing Braille reading errors through a systematic way may reveal patterns of errors, and based on these patterns teachers would be able to differentiate their instruction to improve their students' performances in Braille reading. Hence, it could be argued that the results of the proposed large-scale study may contribute to the accomplishment of ICF goals, since the improvement of literacy skills in children and adolescents with visual disability remains a challenge.

Keywords: Braille, reading accuracy, visual disability

¹ This study constitutes a part of the project „Handedness and Braille Literacy in Individuals with Severe Visual Impairments” is implemented under the “ARISTEIA” Action of the „OPERATIONAL PROGRAMME EDUCATION AND LIFELONG LEARNING” and is co-funded by the European Social Fund (ESF) and National Resources.

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Značaj delovanja učeničkih zajednica i tela u ostvarivanju preventivne funkcije škole

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Polazeći od integrisanog pristupa prevenciji, koji se zasniva na učešću svih značajnih aktera vaspitno-obrazovnog procesa u svim fazama preventivne delatnosti (planiranju, realizaciji, praćenju i unapređivanju), u radu se razmatra uloga učenika u procesu prevencije. Osnovni oblici organizovanja učenika u školi jesu odeljenjska zajednica i učenički parlament, putem kojih učenici mogu učestvovati u identifikovanju i rešavanju problema u učenju, ponašanju i interpersonalnim odnosima, kao i u definisanju pravila ponašanja, nagrada i sankcija za određene oblike poželjnih i nepoželjnih ponašanja itd. Sagledavajući aktivnosti koje su u domenu njihovog delovanja, tj. koje mogu inicirati ili u njima učestvovati, u radu se razmatra značaj koji aktivno učešće učenika ima u ostvarivanju preventivne funkcije škole kako po njih same, tako i po školu u celini. Efekti participacije učenika ogledaju se, između ostalog, u boljem sagledavanju potrebnih pravaca promene, a na osnovu uvažavanja mišljenja učenika; podsticanju saradnje i kvalitetnijih interpersonalnih odnosa; prihvatanju i poštovanju normi i pravila ponašanja,... Razvijajući niz pozitivnih svojstava kod učenika, može se zaključiti da je participacija učenika u donošenju odluka značajnih za njihov rad i život u školi neposredno povezana sa ostvarivanjem preventivne funkcije škole.

Ključne reči: prevencija, participacija, oblici organizovanja učenika

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The importance of pupil organizations in preventative function of school

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their school life is closely connected with performing the preventative function of a school.

Key words: prevention, participation, forms of pupil organization

Having adopted an integrative approach to prevention, based on the participation of all relevant participants of the educational process in all the phases of preventative activity (planning, realization, monitoring and advancement), this paper discusses the role of pupils in the process of prevention. Basic forms of pupil organization within a school are the class unit and the pupils' parliament, through which the pupils are able to participate in identification and tackling the problems that arise during the process of studying, problems related to behavior and interpersonal relationships, as well as in defining the rules of conduct, rewards and sanctions for certain forms of desirable and undesirable behavior, etc. Considering the activities pupils are able to initiate or partake, this paper discusses the significance that pupils' active participation in performing the school's preventative function has for them, as well as for the school in general. The effects of pupils' participation are reflected in more detailed consideration given to the required changes, among other aspects, and are based on the respect for pupils' opinions; other aspects include the stimulation of cooperation and good interpersonal relationships, acceptance of and respect for the behavioral norms and regulations, etc. Through the development of positive attitudes in pupils, it can be concluded that pupils' participation in the decision-making process directly affecting

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Pristupačnost ustanova kulture i sportsko-rekreativnih centara osobama sa invaliditetom

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Socijalni model ometenosti posmatra odnos društva prema različitosti i prepoznaje taj odnos kao osnovni uzrok socijalne isključenosti osoba sa invaliditetom. Ovaj se odnos može ispoljiti na različite načine, a jedan od načina je omogućavanje pristupačnosti obrazovnim, ustanovama servisa javnih usluga, kulturnim kao i ustanovama za sport i rekreaciju.

Osnovni cilj istraživanja je da ispita pristupačnost ustanova kulture (bioskopa i pozorišta) i sportskih centara i na taj način ispita kvalitet ovog segmenta života osoba sa invaliditetom.

Prikupljanje podataka kontrolisano je varijablama koje su se nalazile u observacionom listu, a koji je kreiran za potrebe ovog istraživanja. Prikupljeni su podaci o pristupačnosti ulaza, bilatarnica, bioskopskih/pozorišnih sala, toaleta, kao i pristupačnost praćenja repertoara osobama sa motoričkim i vizuelnim oštećenjima, dok su se u sportsko-rekreativnim centrima prikupljali podaci i o dostupnosti bazena, tuševa, sportskih sala. Pristupačnost je ispitana u 12 pozorišta, osam bioskopa i 11 sportsko-rekreativnih centara na teritoriji Beograda.

Rezultati istraživanja su pokazali da na teritoriji Beograda ne postoji sportsko-rekreativni centar

koji je u potpunosti pristupačan osobama sa invaliditetom, a samo dva bioskopa i jedno pozorište su u potpunosti prilagođeni, ali samo osobama sa motoričkim poremećajima. Statističke analize rađene ANOVA testom ukazuju da je pristupačnost ustanova kulture i sportskih centara u nivou visoke statističke značajnosti ($p=0.000$) veća za osobe sa motoričkim poremećajima u odnosu na osobe sa oštećenjem vida. Ne beleži se statistička značajnost razlike u pristupačnosti za ove dve grupe osoba sa invaliditetom u sledećim varijablama: pristupačnost pozorišne sale/bioskopske dvorane; pristupačnost svlačionice (u sportskim centrima); pristupačnost tuševima.

Dobijeni rezultati idu u prilog činjenici da svi renovirani sportski i kulturni objekti u Beogradu poštuju nove standarde gradnje koji uključuju postavljanje arhitektonskih pomagala za osobe invaliditetom. Kao prioritet, arhitektonske procedure najpre idu u prilog osobama koje koriste invalidska kolica, dok su u većoj meri drugi invaliditeti zanemareni, iako investicija i njihov dodatak celokupnom projektu gradnje nije finansijski zahtevan.

Ključne reči: pristupačnost, ustanove kulture, sportski centri

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Accessibility of cultural institutions and sports centers to persons with disabilities

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The social model of disability focuses on the attitude of society toward diversity and recognizes society as the main cause of social exclusion. This attitude can be expressed in different ways, one of which is to provide accessibility to educational institutions, public service providers, cultural institutions, and sports and recreation centers.

The aim of this paper was to examine accessibility of cultural institutions (cinemas and theaters) and sports centers and thus examine the quality of life in persons with disabilities.

Data collection is controlled through the variables from the check list. The following data were collected: accessibility of entrances, box-offices, cinema/theater halls, toilets, accessibility of monitoring repertoire for persons with motor and persons with visual impairments. The following data were collected in sports centers: accessibility of entrances, toilets, swimming pools, showers, sports halls. Accessibility was examined at 11 theaters, eight cinemas and 11 sports centers in Belgrade.

The results show that there is not even one sport center completely accessible for persons with

disability, and only two cinemas and one theatre are completely accessible but just for persons with motor disability. According to statistical analysis (ANOVA) accessibility of cultural institutions and sports centers is significantly higher ($p=0.000$) for persons with motor disability than for person with visual impairments. There are no significant differences in accessibility between these two groups of persons with disabilities in the following variables: accessibility of theatre/cinema hall; accessibility of wardrobe; accessibility of showers.

The results confirm the fact that all renovated sports and cultural facilities in Belgrade follow new building standards and have architectural supplies for persons with disability. Persons with motor disability obviously have priority, while persons with other disabilities are neglected despite the fact that necessary adaptations are not expensive.

Key words: accessibility, culture and sports centers

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Procena brzine čitanja i razumevanja pročitano¹

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Značajan korak u obrazovanju dece i prvi uslov za uspeh u školovanju predstavlja uspešno savladana veština čitanja i pisanja. Učenje čitanja i pisanja zauzima izuzetno važno mesto u nastavnom planu i programu, a metodička razmatranja i usavršavanja su stalni pratilac ove oblasti. Rezultati većeg broja studija pokazuju da deca sa oštećenjem vida ne čitaju jednako dobro kao deca tipičnog razvoja istog uzrasta i da najčešće ne uspevaju da dosegnu brzinu čitanja vršnjaka bez oštećenja vida.

Cilj rada je proceniti brzinu čitanja i razumevanje pročitano¹ kod slepih učenika adolescentnog uzrasta. Uzorkom je obuhvaćeno 35 slepih učenika (22 dečaka i 13 devojčica), uzrasta od 13 do 21 godine. Za procenu brzine čitanja i razumevanja pročitano¹ primenjen je Test za ocenjivanje sposobnosti čitanja (Kocić, Vladislavljević, Popović, 1983) koji je štampan na Brajevom pismu. Protokolom ocenjivanja sposobnosti čitanja se predviđa da učenici tačno naveđu deset određenih činjenica iz teksta, što ukazuje na nivo razumevanja pročitano¹, a vreme čitanja nije bilo ograničeno. U radu su korišćene deskriptivne statističke metode.

Prosečna brzina čitanja ispitanika utvrđena ovim istraživanjem je 51.6 reči u minuti, uz velike individualne razlike (min-10; max-130 reči/min). Bez

obzira na brzinu čitanja koja je na ukupnom uzorku niža od prosečnih testovnih vrednosti (235 reči u minutu za decu tipičnog razvoja), 79% ispitanika ima visok nivo razumevanja pročitano¹. Slepí adolescenti čitaju znatno sporije od učenika tipičnog razvoja, što može ometati akademski domet ovih učenika. Ohrabruje činjenica da je razumevanje i zapamćivanje pročitano¹ kod slepih adolescenta na veoma visokom nivou.

Ključne reči: Brajevo pismo, brzina čitanja, razumevanje pročitano¹, slepi adolescenti

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1 Rad je realizovan u okviru projekata „Kreiranje Protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“ (br. 179025) i „Socijalna participacija osoba sa intelektualnom ometenošću“ (br.179017), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije, 2011-2014.

Evaluation of reading speed and reading comprehension in blind adolescents¹

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A significant step in education (of children) and the first condition for success in education are successfully mastered reading and writing skills. Learning to read and write has a very important place in the curriculum, and methodological analysis and improvement are constantly present in this area. Results of a number of studies show that children with visual impairment do not read as well as children with typical development of the same age; also, visually impaired children often fail to reach reading speed of their peers with normal vision.

The goal of this paper is to assess reading speed and reading comprehension in blind adolescents. The sample included 35 blind students (22 boys and 13 girls) aged 13 to 21. The Test for assessing reading skills, printed in Braille, was used for the assessment of reading speed and reading comprehension. According to the protocol provided for Evaluation of reading skills, students should clearly identify ten specific facts from the article, which indicates the level of reading comprehension. Reading time was not limited. Descriptive statistical methods were used.

The average reading speed determined in this study was 51.6 WPM (words per minute), with high individual differences (min-10; max-130 WPM).

Regardless of the reading speed, which is in the total sample lower than the expected value of the test (235 WPM for children with typical development), 79% of the respondents have a high level of reading comprehension. The fact that blind adolescents read more slowly than students with typical development can impede their academic achievement. It is encouraging that understanding and memorizing what has been read in blind adolescents is at a very high level.

Key words: Braille, reading speed, reading comprehension, blind adolescents

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1 This paper is part of the project „Creating a Protocol to assess educational potentials of children with disabilities as criteria for the development of individual educational programs” (No. 179025) and of the project „Social participation of people with intellectual disabilities” (No. 179017), funded by the Ministry of Education, Science and Technological Development of the Republic of Serbia, 2011-2014

Inkluzija u redovnim školama – prednosti i nedostaci

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Kao rezultat generalno prihvaćene prakse u R. Makedoniji o inkluziji učenika sa posebnim obrazovnim potrebama u redovnim školama i kao rezultat prethodnih istraživanja napravljeni od strane stručnog tima POU „Mace Ovčarove“ – Veles, javila se potreba za novo istraživanje, sa ciljem utvrditi dali i koliko celokupni vospitno – obrazovni kadar, stručne službe i direktore su upućeni u procesu inkluzije i koliko su svi oni upozanti sa standardima za efektivnu inkluzivnu školu.

Podatke za ovo istraživanje dobijeni su na osnovi Anketnog upitnika sa ukupno 9 pitanja namenjen za vospitno – obrazovni kadar i stručne saradnike iz pet (5) osnovnih škola u Velesu, a obuhvaćeni su ukupno 124 ispitanika.

Rezultate istraživanja prikazani su tabelarno i grafički u odnosu na svako postavljeno pitanje iz Anketnog upitnika, za svaku školu pojedinačno i ukupno, a urađena je i komparativna analiza na odgovore u odnosu na pol ispitanika, njihovo radno mesto i radno iskustvo.

Od dobijenih rezultata najvažnije izdvajamo: delimična ili celokupna neopremljenost škola, nemanje inkluzivnih timova i prevladavanje negativnog stava na efekat inkluzivnog obrazovanja na dece sa posebnim potrebama.

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Prioritete i preporuke namenjeni za škole, sa ciljem njihovo uspešno prerastanje u savremene efektivne inkluzivne škole:

Obezbeđenje dostupnosti (prostorne, materijalno-tehničke i pedagoške), razumevanje i poštovanje razlike, razvijanje individualnih programa, aktivno uključenje svih stručnih potencijalnih kadra: mobilni/servisni defektolozi u redovni obrazovni sistem i donošenje programe za njihov rad u školama, edukacija roditelja, edukacija nastavnog kadra za rad sa decom sa razvojnim problemima i posebne obrazovne potrebe, afirmacija timskog rada u procesu inkluzije i razvijanje različite forme saradnje inkluzivnih škola sa organima, institucijama i pojedinaca razlicitog nivoa podrške i razumevanje inkluzivne prakse.

*Ključne reči: materijalno – tehnička i pedagoška
dostupnost u redovne osnovne škole,
efektivna inkluzivna škola*

Inclusion in regular schools – advantages and disadvantages

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As a result of general practice in the Republic of Macedonia concerning the inclusion of students with special needs in regular schools, and as a result of previous research performed by the professional team of Special Primary School „Maca Ovcarova” in Veles, the need for a new research arose, with the aim to determine whether and to what extent teaching staff, professional services, and school principles are familiar with the process of inclusion and the standards for effective inclusive school.

The data for this research were obtained from a Survey questionnaire with a total of 9 questions aimed at teaching staff and professionals from five primary schools in Veles. The sample consists of 124 examinees.

Research results are presented in tables and graphs with regard to every question from the Survey questionnaire, for each school individually and all of them together. Also, comparative analysis of responses, with regard to the examinees' gender, workplace and work experience, was performed.

The most significant results are the following: partially or completely unequipped schools, lack of inclusive teams and predominance of a negative attitude toward the effect of inclusive education of children with special needs.

Priorities and recommendations for schools, so that they can successfully transform into contemporary effective inclusive schools, are the following:

Providing accessibility (spatial, material-technical, and pedagogical), understanding and respecting differences, developing individual programs, active participation of all professional services: itinerant special teachers in regular education and developing programs for their work, education of parents, educating teaching staff to work with children with developmental disabilities and special educational needs, affirmation of team work in inclusion, and the development of different forms of cooperation between inclusive schools and institutions and individuals with different levels of support and understanding of inclusion.

*Key words: material-technical and pedagogical
accessibility in regular primary schools,
effective inclusive school*

Društvena prihvaćenost dece sa smetnjama u razvoju u uslovima inkluzivnog obrazovanja i vaspitanja

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U radu je analizirana naučna i stručna literatura koja se bavi proučavanjem društvene prihvaćenosti dece sa smetnjama u razvoju u uslovima inkluzivnog obrazovanja i vaspitanja. Osnovna istraživačka pitanja bila su: način na koji su deca sa smetnjama u razvoju prihvaćena od strane vršnjaka sa tipičnim razvojem, zatim, koji su ključni faktori i dominantni obrasci ostvarivanja socijalne interakcije u uslovima inkluzivnog obrazovanja i vaspitanja i koji su programi intervencije najučestaliji u uslovima inkluzivnog obrazovanja i vaspitanja.

Revijalnim pregledom dostupne literature i analizom rezultata prikazanih u izdvojenim studijama, sistematizovana su saznanja iz ove oblasti sa posebnim osvrtom na decu sa motoričkim poremećajima. Kao rezultat sveobuhvatne pretrage, prikupljeno je i pregledano ukupno 53 istraživanja od kojih je 22 istraživanja ispunilo kriterijume uključivanja, odnosno svojim rezultatima pružalo odgovore na postavljena istraživačka pitanja.

Kao osnovni faktori vršnjačkog prihvatanja izdvajaju se: stepen znanja i razumevanja ometenosti, percepcija različitosti kroz vidljive fizičke naznake i prisustvo agresivnog ponašanja bez obzira na vrstu i stepen razvojne smetnje. Društvene preferencije

za stupanje u interakciju sa vršnjacima sa smetnjama u razvoju, kao jedna od komponenata stavova, menjaju se sa uzrastom, a zavise i od nivoa razvojnih sposobnosti koje dato okruženje i planirana aktivnost zahtevaju. Kao posebno vulnerabilna, izdvaja se populacija dece sa motoričkim poremećajima sa obzirom da su deca tipičnog razvoja na predškolskom uzrastu više svesna razlika između sebe i svojih vršnjaka sa smetnjama u razvoju ukoliko su te razlike fizički očigledne i ispoljene u onim aktivnostima ili okruženjima u kojima je mogućnost njihovog učestvovanja ograničena. Programi intervencije su usmereni na podučavanje dece tipičnog razvoja o postojećim razlikama, na unapređivanje socijalnih veština i podizanje socijalne kompetentnosti dece sa smetnjama u razvoju i na uklanjanje prepreka njihovom uključivanju.

Ključne reči: društvena prihvaćenost, deca sa smetnjama u razvoju, inkluzija

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Social acceptance of children with developmental disabilities in terms of inclusive education

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This paper analyzes scientific and professional literature focused on social acceptance of children with developmental disabilities in terms of inclusive education. The main research questions were: the manner in which children with developmental disabilities were accepted by their typically developing peers, followed by the key factors and dominant patterns of social interactions, and the most common intervention programs in terms of inclusive education.

Systematization of the knowledge in this field was performed by reviewing available literature and analyzing the results presented in allocated studies, with a special emphasis on children with motor disorders. As a result of comprehensive research, a total of 53 studies was collected and reviewed, out of which 22 studies met the inclusion criteria and provided answers to the research questions.

Identified basic peer acceptance factors are the following: the level of knowledge and understanding of disability, the perception of differences through the visible physical indications and the presence of aggressive behavior, regardless of the disability type and level. Social preferences toward interacting with peers with developmental disabilities, as one of the

components of attitudes, are changing with age, and are also determined by the level of developmental abilities that the environment and planned activity require. The population of children with motor disorders is particularly vulnerable, given that typically developing preschool children are more aware of the differences between themselves and their peers with disabilities if those differences are physically obvious and manifested in those activities or settings in which the probability of their participation is limited. Intervention programs are directed to typically developing preschool children's understanding of existing differences, on improving social skills and increasing social competence in children with developmental disabilities, and on removing the barriers to their inclusion.

Key words: social acceptance, children with developmental disabilities, inclusion

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Uspešnost nagluvih učenika u realizaciji nastave putem veb portala

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Edukativni softveri smešteni na veb portalima su resursi od izuzetnog značaja u realizaciji individualizovane nastave. Da bi neki obrazovni softver mogao da se koristi, mora formom i sadržajem da odgovori na pedagoške, metodičke, didaktičke i psihološke zahteve koji su istaknuti u nastavnim planovima i programima svakog predmeta. Cilj rada je bio da se ispita uticaj pojedinih faktora (oštećenje sluha, početak rehabilitacije, opšti uspeh, obrazovni nivo roditelja) na uspeh učenika u nastavi prirode i društva, organizovane putem veb portala.

Uzorak za istraživanje činilo je 43 učenika nižeg osnovnoškolskog uzrasta, iz dve škole za gluvu i naglupu decu, koji su pratili nastavu prirode i društva na veb portalu. U uzorku se nalazilo 26 učenika sa veoma teškim oštećenjem sluha, 9 sa teškim i 8 sa umerenim oštećenjem sluha.

Nivo znanja učenika procenjen je na početku i na kraju eksperimenta kriterijumskim testovima znanja, posebno sastavljenim u svrhu istraživanja. Pitanja su bila usmerena na tri domena: poznavanje činjenica, razumevanje i primena znanja. Ukupan broj bodova na inicijalnom testu iznosio je 36, dok je na finalnom testu iznosio 72 boda.

Dobijeni rezultati su pokazali da na uspeh učenika utiču početak rehabilitacije, opšti uspeh i stepen

stručne sprema majke. Rezultati t-testa su pokazali da učenici, koji su prošli ranu rehabilitaciju, postižu značajno bolji uspeh na testu znanja ($t=2,144$; $p=0,038$), tako da se i u ovom istraživanju faktor rane rehabilitacije javlja kao značajan prediktor postignuća učenika. Najbolje rezultate postigli su učenici sa odličnim uspehom, a razlika je statistički značajna ($F=5,217$; $p=0,01$). Rezultati ANOVA testa su pokazali da školska sprema majke u značajnoj meri utiče na rezultate ostvarene na testu ($F=3,405$; $p=0,043$), te da su majke sa višim nivoom obrazovanja angažovanije oko školskih obaveza svoje dece.

Hipermedijalne i multimedijalne mogućnosti veb tehnologija pružaju njihovim kreatorima široki izbor u načinu prikazivanja informacija, a u skladu sa obrazovnim potrebama gluvih i nagluvih učenika.

Ključne reči: nagluvi učenici, edukativni veb portal, priroda i društvo

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Success of hard of hearing students in teaching through web portals

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Educational software placed in portals around the web has great significance in realisation of individualized teaching. In order to be used, educational software has to answer pedagogical, methodological, didactic and psychological demands which are highlighted in teaching plans and programs of every subject. The goal of the research was to examine the influence of some factors (hearing impairment, beginning of rehabilitation, overall success, educational level of parents) on students' success in teaching nature and society through web portals.

The research sample consisted of 43 students of lower elementary school age, from two schools for deaf and hard of hearing children who attended the class of nature and society on web portal. The sample consisted of 26 students with very severe hearing loss, 9 with moderately severe hearing loss and 8 with moderate hearing loss.

Students' knowledge level was estimated at the beginning and at the end of the experiment by means of a criteria test specially designed for the purpose of this research. The questions were directed toward three domains: knowledge of facts, understanding and use of knowledge. The total number of points on the initial test was 36, and 72 on the final test..

The obtained results showed that beginning of rehabilitation, overall success and mother's level of education all influence the final success (score) of students. Results of the t test showed that students who went through early rehabilitation achieved much better results on the test of knowledge ($t=2,144$; $p=0,038$). Thus, we can conclude that early rehabilitation is a predictor of students' success. Students with excellent success at school achieved the best results, so the difference is statistically very important ($F=5,217$; $p=0,01$). The results of ANOVA test show that mothers' education level significantly influences the results ($F=3,405$; $p=0,043$). Mothers with higher level of education are more engaged in their children's school work.

Hypermedial and multimedial opportunities of web technologies provide its creators with wide range of choices in a way that they show information according to the educational needs of deaf and hard of hearing students.

Key words: hard of hearing students, educational web portal, nature and society

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Individualni obrazovni plan deteta sa višestrukom ometenošću (Prikaz slučaja)

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Uvođenjem inkluzivnog pristupa u obrazovanju i vaspitanju dece sa intelektualnom ometenošću, otvara se mogućnost izrade i primene individualnog obrazovnog plana ukoliko rezultati individualizovanog pristupa u radu nisu na zadovoljavajućem nivou.

Cilj ovog rada jeste prikaz primene individualnog obrazovnog plana u radu sa detetom pripremno-predškolske grupe osnovne škole „Sava Jovanović Sirogojno” u Zemunu koje pripada grupi dece sa višestrukom ometenošću.

Tokom faze opservacije ispitan je nivo organizovanosti psihomotorike, nivo organizovanosti praktičkih, gnostičkih i saznavnih funkcija. Rezultati primenjenih opservacija ukazuju na nizak nivo razvijenosti u svim oblastima što je uslovalo i usmerilo pripremu individualnog obrazovnog plana.

Nakon perioda od šest meseci, evaluacija realizacije individualnog obrazovnog plana je ukazala na značajne pomake u većini vaspitno-obrazovnih područja, a odnose se na uspešnu upotrebu slika kao odgovora na jednostavnija pitanja, izvođenje jednostavnijih grafomotornih vežbi i aktivnije učestvovanje u hranjenu i oblačenju. Prilagođenost pristupa u vaspitno-obrazovnom radu ograničenim mogućnostima verbalnog i grafomotornog izražavanja, primena stimulativnih savremenih nastavnih sredstava kao što je interaktivna tabla, doprineli su uspešnijem

postizanju očekivanih ishoda. Mogućnost revizije individualnog obrazovnog plana u delu koji se odnosi na aktivnosti čiji ishodi nisu na očekivanom nivou značajno doprinosi uspešnijem planiranju i usklađivanju pristupa u radu sa trenutnim nivoom postignuća deteta.

*Ključne reči: individualni obrazovni plan,
dete sa višestrukom ometenošću, ishodi*

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Individual education plan for a child with multiple disorders (Case study)

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Introduction of inclusive approach in educating children with intellectual disorders enables the development and application of individual education plan if the results of individualized approach are not satisfactory .

The aim of this study is to present the application of individual education plan in working with a child from a preschool group with multiple disabilities at „Sava Jovanović Sirogojno” primary school in Zemun.

During the observation period, the level of psychomotor organization, the level of practical and gnostic organization and the level of mental ability were examined. The results showed a low level of development in all areas, which led to the development of individual education plan.

After the period of six months, evaluation of the realization of individual education plan showed significant improvements in the majority of educational areas, such as successfully using pictures as answers to simple questions, performing simpler graph motor exercises and actively participating in feeding and dressing. Adaptation of educational approach to limited verbal and graph motor expression, and the application of stimulating modern lecture resources such as an interactive whiteboard, contributed to successful achievement of the expected results. The possibility to revise individual

education plan in the part that refers to activities the results of which were not on the expected level, significantly contributes to a successful planning and adapting the work approach to the level of a child's achievement.

*Key words: individual educational plan,
child with multiple disorders, results*

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Pamćenje i uspešnost u matematici kod dece sa lakom intelektualnom ometenošću¹

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Cilj ovog istraživanja bio je da se utvrdi da li postoji povezanost auditivnog, vizuelnog i verbalnog pamćenja kao prediktorskih varijabli s uspehom u nastavi matematike kod dece s lakom intelektualnom ometenošću (LIO) kao kriterijumskom varijablom. Uzorak, na kome je bazirano istraživanje obuhvatio je 31 učenika oba pola. Kriterijum za izbor ispitanika sadržao je sledeće zahteve: količnik inteligencije od 50 do 69, procenjen WISC skalom intelektualnih sposobnosti, kalendarski uzrast od 14 do 16 godina i odsustvo neuroloških, psihijatrijskih i višestrukih smetnji. Istraživanje je obavljeno u svim osnovnim školama za decu s LIO na teritoriji Beograda. Verbalno pamćenje procenjeno je Reyovim testom verbalnog pamćenja (Rey Auditory verbal learning test). Vizuelno pamćenje ispitano je suprestom 5 – Vizuelno pamćenje iz Akadia testa razvoja sposobnosti, dok je za procenu sposobnosti auditivnog pamćenja korišćen Suptest 8 – Auditivno pamćenje. Numeričke ocene iz nastavnog predmeta Matematika dobijene su standardnom analizom pedagoške dokumentacije. U skladu sa postavljenim ciljem istraživanja primenjene su metode neparametrijske statistike. Obradom rezultata istraživanja dobijen je koeficijent multiple korelacije od 0,45 koji govori o povezanosti ispitanih prediktora sa uspehom iz matematike. Oko 12% ukupne varijanse uspeha iz matematike

objašnjava se razlikama u postignuću na testovima vizuelnog, auditivnog i verbalnog pamćenja. Dobijena razlika je statistički značajna ($p=0,001$). Vrednost β koeficijenta pokazuje da sposobnost verbalnog pamćenja daje najveći parcijalni doprinos odličnog uspeha iz matematike kod dece s LIO. Rezultati izvedenog istraživanja ukazuju na neophodnost primene mnemotehnika (loci metod, akronimi, lanac metod, metod ključnih reči, rimovanje..) pri usvajanju nastavnih sadržaja iz matematike.

Ključne reči: vizuelno, auditivno, verbalno pamćenje, matematika

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1 Rad je nastao u okviru projekata „Socijalna participacija osoba sa intelektualnom ometenošću” (br. 179017), koje finansira Ministarstvo prosvete i nauke Republike Srbije, „Kreiranje Protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa”, (br. 179025), finansiran od strane Ministarstva prosvete, nauke i tehnološkog razvoja nauke Republike Srbije

Memory and success in mathematics in children with mild intellectual disability¹

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The main goal of this research is to determine whether there is a relation between auditory, visual, and verbal memory, as predictor variables for success in teaching mathematics in children with mild intellectual disability. The sample consists of 31 participants, of both sexes. The criterion for the selection of participants was IQ from 50-60, estimated by WISC scale of intellectual ability, age from 14 to 16, and absence of neurological, psychiatric and multiple disabilities. The survey was conducted in all schools for children with mild intellectual disability in Belgrade. Verbal memory was tested by subtest 5-Visual memory from Akadia test of developmental abilities while Auditive memory was tested by subtest 8-Auditive memory. Grades in mathematics of children with mild intellectual disability were obtained by standard analysis of pedagogical documentation. Methods of parametric and nonparametric statistics were used. Research results show that the coefficient of multiple correlation is 0,45, which indicates the existence of a relation between the tested predictors and success in mathematics. About 12% of success in mathematics can be explained by differences in test results of visual, auditive and verbal memory. The differences mentioned above are statistically significant ($p=0.001$). β coefficient value points

out that verbal memory is the most important for success in mathematics in children with mild intellectual disability. The obtained results pointed out a necessity of applying mnemonics (loci method, acronyms, chain method, key words method, rhyming..) in teaching mathematics.

*Key words: visual, auditive and verbal memory,
mathematics*

¹ This article is a part of the following projects: „Social Participation of Persons with Intellectual Disability”, which was financed by the Ministry of Education and Science, the Republic of Serbia (No. 179017) and „Creating Protocol for assessment of educational potential in children with intellectual disability as well as criteria for the development of individual education programs”, which was financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia (No. 179025).

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Obrazovno postignuće adolescenata sa oštećenjem sluha i intelektualnom ometenošću¹

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znanja iz nastavnih predmeta iz područja prirodnih
nauka.

*Ključne reči: intelektualna ometenost, oštećenje
sluha, informaciono komunikativne tehnologije*

Obrazovno postignuće adolescenata sa oštećenjem sluha i intelektualnom ometenošću posmatrano je kroz nivo i kvalitet usvojenosti nastavnih sadržaja putem tradicionalne nastave i primenom informaciono komunikativne tehnologije. Uzorak je činilo 20 adolescenata, oba pola sa lakom intelektualnom ometenošću, čiji se IQ kretao od 51-70 prema rezultatima WISC skale, i oštećenjem sluha preko 85dB. Uzorak je za potrebe deskriptivne pilot studije podeljen na dve grupe. Inicijalno ispitivanje svih ispitanika izvršeno je putem testova znanja koji čine sastavni deo standardne školske dokumentacije. Tokom jedne školske godine jedna grupa je usvajala znanja putem tradicionalne nastave a druga uz podršku informaciono komunikativne tehnologije, odnosno programa koji su uključivali nastavne sadržaje više nastavnih predmeta iz područja prirodnih nauka. Sadržaji svakog nastavnog predmeta su individualizovani prema sposobnostima ispitanika, rangirani u pet nivoa prema složenosti zadataka. Nakon godinu dana ispitanici su testirani istim testom znanja. Deskriptivnom statističkom analizom, („t“ test za testiranje razlika aritmetičkih sredina malih, nezavisnih uzoraka), dobijeni su rezultati koji pokazuju da je grupa, koja je usvajala nastavne sadržaje uz podršku obrazovne računarske tehnologije, pokazala bolju uspešnost na testovima

1 Rad je proistekao iz projekta „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“, broj 179025 (2011-2014), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije

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Achievement of adolescents with hearing impairment and intellectual disability in education¹

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competence in the examined domains of natural sciences.

Key words: intellectual disability, hearing impairment, information and communication technologies

Cognitive functioning of adolescents with intellectual disability and hearing impairment was observed through the level of concept acquisition by applying dynamic programs using computer techniques. The sample consisted of 20 adolescents of both genders, with mild intellectual disability whose IQ ranged from 51-70 according to the results of WISC scale and hearing impairment over 85dB. The sample was divided into two groups. The initial research on the complete sample was conducted by knowledge tests specially developed for the purpose of this research. Within the period of one year, one group was adopting knowledge through traditional teaching, while the other group was stimulated by information and communication technologies (dynamic programs that include different courses in natural sciences). Contents of the dynamic programs were individualized for each examinee according to their cognitive abilities and ranked in five levels according to task complexity. After the period of one year all the examinees were finally tested by the same knowledge test. The results were obtained by means of descriptive statistical analysis ("t" test for difference between means of small, independent samples) and indicate that the group, whose respondents adopted new educational content with the support of educational computer technology, achieved a higher quality and level of cognitive

1 This paper results from the project „Developing a protocol for the assessment of educational potentials in children with disabilities as a criterion for the development of individual education programs” nr. 179025 (2011-2014), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

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Kvalitet života osoba sa ometenošću
Life quality of people with disabilities

Kvalitet komunikativnog života osoba sa afazijom vaskularne etiologije – Preliminarno ispitivanje¹

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Vaskularna oboljenja mozga predstavljaju vodeći uzrok morbiditeta kod odraslih, pri čemu kod trećine obolelih ostaju trajna fizička i psihička oštećenja. Posledica je sve veći broj osoba sa afazijom koje imaju potrebu za dugotrajnom rehabilitacijom. Afazija se često manifestuje teškim oštećenjem govora, jezika i kognicije. Ova oštećenja narušavaju proces komunikacije, osiromašuju ličnost i često menjaju životne uloge koje je osoba do tada imala. Jedan od značajnih faktora u izboru pristupa tretmanu afazija predstavlja subjektivna procena pacijenta o uticaju afazije na sposobnost njegove komunikacije sa okolinom. S obzirom na to, cilj ovog rada je da se utvrdi uticaj govornog i jezičkog deficita na kvalitet komunikacije osoba sa afazijom. U radu su prikazani rezultati primene skale kvaliteta komunikativnog života kod pacijenata sa različitim oblicima afazičkih sindroma. Rezultati su pokazali da svi pacijenti navode da im poremećaj govora u određenim situacijama narušava proces komunikacije, iako sveukupni nalazi ukazuju na relativno dobar kvalitet komunikativnog života.

Ključne reči: afazija, moždani udar, kvalitet života

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1 Rad je proistekao iz projekta „Evaluacija tretmana stečenih poremećaja govora i jezika” br. 179068 (2011-2014) čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

Quality of communication life in individuals with vascular aphasia – Preliminary research¹

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Cerebrovascular diseases are a leading cause of morbidity in adults, resulting in permanent physical and psychological impairments in one third of the patients. As a result, the number of individuals with aphasia who need long-term rehabilitation is increasing. Aphasia is often manifested in severe speech, language and cognition impairments. These impairments impair communication, weaken personality and often change life roles of the affected people. One of the significant factors in choosing a treatment approach for aphasia is the patient's subjective evaluation of the influence of aphasia on his ability to communicate with the environment. With regard to this, the aim of this paper is to determine the influence of speech and language impairment on the quality of communication in people with aphasia. The paper presents the results of quality of communication life scale in patients with different forms of aphasic syndromes. The results show that speech disorder impairs communication in certain situations in all the patients, although the overall results indicate a relatively good quality of communication life.

Key words: aphasia, stroke, quality of life

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1 This paper originated from the scientific project „The Evaluation of Acquired Speech and Language Disorders”, no. 179068 (2011-2014), the implementation of which is financed by the Ministry of Education, Science and Technological Development Republic of Serbia.

Kvalitet komunikativnog života odraslih osoba sa cerebralnom paralizom¹

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Osobe sa cerebralnom paralizom međusobno se razlikuju u govornim, jezičkim i komunikativnim sposobnostima. U ovoj populaciji postoje osobe koje nemaju, ili imaju blaže govorno-jezičke smetnje, dok sa druge strane postoje i osobe sa teško razumljivim govorom, ili potpunim odsustvom govora.

Cilj ovog istraživanja je bio da se utvrdi kvalitet komunikativnog života, kao i stepen motivacije za komunikacijom odraslih osoba sa cerebralnom paralizom. Posebno su ispitivane razlike u kvalitetu komunikativnog života između osoba sa različitim stepenom razumljivosti govora.

Uzorak je činilo 28 osoba sa cerebralnom paralizom uzrasta od 24 do 47 godina. Tokom ispitivanja su korišćeni sledeći instrumenti: Skala kvaliteta komunikativnog života, Test za ispitivanje razumljivosti govora i Test za ispitivanje osnovnog laringealnog glasa (Fo). Nakon procene razumljivosti govora, ispitanici su podeljeni u dve grupe. Prvu grupu su činili ispitanici sa razumljivim govorom, dok se druga grupa sastojala od ispitanika sa teško razumljivim govorom. Dobijeni podaci su kvantitativno i kvalitativno analizirani.

Obradom rezultata dobijeni su podaci o kvalitetu komunikativnog života odraslih ispitanika sa cerebralnom paralizom. Pokazalo se da ispitanici sa

razumljivim govorom postižu veće skorove na Skali kvaliteta komunikativnog života u poređenju sa ispitanicima čiji je govor teško razumljiv za okolinu. Međutim, i pored nižih postignuća na skali, pokazalo se da ispitanici sa teško razumljivim govorom imaju visok motiv za komunikacijom. Osim toga, važno je istaći da obe grupe ispitanika sa cerebralnom paralizom, bez obzira na razlike u stepenu razumljivosti govora, visoko vrednuju kvalitet sopstvenog života u celini.

Ključne reči: osobe sa cerebralnom paralizom, kvalitet komunikativnog života, razumljivost govora

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Quality of communication life in adults with cerebral palsy¹

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People with cerebral palsy differ in speech, language and communication skills. Within this population, there are people who do not have or have mild speech and language disorders, but on the other hand there are people with incomprehensible speech or complete absence of verbal production.

The aim of this study was to determine the quality of communication life, as well as the degree of motivation for communication in adults with cerebral palsy. Differences in the quality of communication life between people with different levels of speech intelligibility were particularly examined.

The study included 28 participants with cerebral palsy aged between 24 and 47. The following instruments were used: Quality of Communication Life Scale, Speech Intelligibility Test and Test for Basic Laryngeal Voice (Fo). After assessing speech intelligibility, the participants were divided into two groups. The first group were participants with comprehensible speech, while the second group were participants with barely intelligible speech. The obtained data were quantitatively and qualitatively analyzed.

The obtained results indicated the data about quality of communication life in adult participants with

cerebral palsy. Participants with comprehensible speech achieve higher scores on Quality of Communication Life Scale compared to those with barely intelligible speech. However, despite their lower achievement on the scale, participants with barely intelligible speech showed high level of motivation for communication. In addition, it is important to note that both groups of participants with cerebral palsy, regardless of the differences in the level of speech intelligibility, highly value general quality of their lives.

Keywords: people with cerebral palsy, quality of communication life, speech intelligibility

¹ This paper originated from the scientific project „The Evaluation of Acquired Speech and Language Disorders”, no. 179068 (2011-2014), the implementation of which is financed by the Ministry of Education, Science and Technological Development Republic of Serbia.

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Uloga vida u spontanom i namernom izražavanju emocija

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Sposobnosti adekvatnog izražavanja sopstvenih i tačnog prepoznavanja emocija drugih određuju kvalitet društvenosti svakog čoveka. U različitim životnim situacijama (upoznavanje, udvaranje, intervju za posao, ostvarivanje roditeljskih, profesionalnih i drugih socijalnih uloga) ove sposobnosti imaju važnu ulogu. Mnoge istraživače je interesovalo kakva je uloga vida u usvajanju emocionalnih izraza. Cilj ovog rada je da se uvidom u dostupnu literaturu prikažu istraživanja koja su se bavila ulogom vida u spontanom i namernom izražavanju emocija.

U nizu istraživanja utvrđeno je da je namerna ekspresija emocija slepih i slabovidih osoba teža za prepoznavanje u poređenju sa njihovom spontanom ekspresijom istih emocija, ali i sa namernom ekspresijom emocija kod osoba iz opšte populacije. Utvrđeno je da su sposobnosti namernog izražavanja emocija kod kongenitalno slepe dece lošije što su deca starija, dok kod dece koja su kasnije izgubila vid nisu nađene razlike s obzirom na uzrast. Analize video materijala pokazale su da je spontana facijalna ekspresija tuge, sreće, straha, besa, gađenja, iznenađenja kod dece i odraslih sa oštećenjem vida ista kao u opštoj populaciji. Nađena je istovetnost i u drugim spontanim obrascima ekspresivnih znako-

va (telesni pokreti, pokreti očiju, artikulacija...) koji prate kompleksnija emotivna stanja.

Rezultati jasno pokazuju da univerzalnost spontanog emocionalnog izraza, zapažena u brojnim istraživanjima, ima filogenetsku osnovu i da su svi ljudi rođeni sa ovim sposobnostima. Dakle, vizuelno opažanje nije neophodno kao posrednik u učenju spontanog izražavanja emocija. Namerno izražavanje emocija slepih je generalno neadekvatno, što ukazuje da ono donekle zavisi od vida, odnosno vizuelnog učenja. Opadanje ovih sposobnosti sa godinama kod kongenitalno slepih verovatno je ishod odsustva povratne vizuelne informacije. Iznenadujuće uspešno simuliranje emotivnih stanja nekih kongenitalno slepih pojedinaca svedoči da se sposobnosti namernog izražavanja emocija mogu razviti obezbeđivanjem alternativnih nevizuelnih povratnih informacija.

Ključne reči: spontano izražavanje emocija, namerno izražavanje emocija, oštećenje vida, nevizuelna povratna informacija

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Role of sight in spontaneous and intentional emotional expression

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Quality of sociability is determined by one's ability to adequately express emotions and accurately recognize emotions of others. In many everyday situations (meeting people, dating, job interview, achieving professional and other social roles) these abilities play an important role. Many researchers were interested in the role of sight in acquiring emotional expressions. The purpose of this article is to give a review of available researches on the role of sight in spontaneous and intentional emotional expression.

Numerous researches have established that intentional expression of emotions in blind and low sighted people is hard to recognize compared to their spontaneous expression of the same emotions, and also compared to intentional expression of emotions in general population. It was established that abilities of expression of emotions in congenitally blind children diminish with age. Differences related to age were not found in children who lost vision later. Video material analysis showed that spontaneous facial expression of sadness, happiness, fear, anger, disgust and surprise in children and visually impaired adults, including ones with congenital blindness, is the same as in general population. Also, no differences were found

in other spontaneous patterns of expressive signs (body movement, eye movement, articulation...) which follow more complex emotional states.

The results clearly show that universality of spontaneous emotional expression, present in many researches, has phylogenic basis, and that all people were born with these abilities. Thus, visual perception is not a necessary mediator in learning spontaneous expressing of emotions. Intentional emotional expression of blind is generally inadequate, which shows that it is related to vision and visual learning. Decrease of these abilities with age in congenitally blind is most likely the outcome of lack of visual feedback. Astonishingly successful simulation of emotional states in some congenitally blind subjects proves that abilities of intentional expression could be developed by supplying alternative nonvisual feedback.

Key words: spontaneous emotional expression, intentional emotional expression, visual impairment, nonvisual feedback

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Uključivanje u sportske aktivnosti i socijalni status aktivnih sportista sa invaliditetom

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nja za konkretnu sportsku aktivnost, a da ova lica uglavnom pripadaju delu populacije sa nižim socijalnim statusom.

Ključne reči: invaliditet, sportske aktivnosti, uzrast, socijalni status

Sva istraživanja jednoglasno naglašavaju veliki značaj sporta i njegov nezamenljiv doprinos kvalitetu života ovih lica. Međutim, uprkos ovim nedvosmlenim zaključcima i preporukama, broj osoba sa invaliditetom koje se aktivno bave sportom u Srbiji nije veliki i iznosi oko 17690 (Sportski savez invalida Srbije, 2013), što je približno 2-2.5% ove populacije. Da bi se došlo do odgovara zašto se veći broj osoba sa invaliditetom ne bavi sportom, potrebno je dobiti odgovore i na pitanja ko se i zašto u okviru ove populacije bavi sportom. U procesu dobijanja odgovora na ova pitanja važno je ustanoviti i neke od osnovnih pokazatelja socijalnog statusa onih koji se u Srbiji bave sportom. U tom cilju je 28 sportista sa invaliditetom popunilo standardni upitnik koji se odnosi na socijalni status vrhunskih sportista, a koji je u Republičkom zavodu za sport konstruisan 2000 godine. Podaci, do kojih se došlo uz pomoć ovog upitnika, ukazuju na to da se u Srbiji sportom bave osobe sa invaliditetom čiji je prosečan uzrast 35.5 ±10.17. Rezultati ovog istraživanja potvrđuju da se u Srbiji ne sprovodi plansko uključivanje osoba sa invaliditetom u sport, da je učešće u sportskim aktivnostima ovih lica najčešće rezultat njihove svesti o značaju sporta za zdravlje, kao i ličnog interesova-

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Participation in sports activities and social status of active athletes with physical impairment

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All studies inseparably emphasize great importance of sport and its irreplaceable contribution to the quality of lives of persons with physical impairment. However, in spite of these unambiguous conclusions and advice, the number of athletes with physical impairment in Serbia is not big and its total is about 17690 (Sports Association of Persons with Disabilities, 2013) or approximately 2-2.5% of this population. To find the answer to the question why more persons with physical impairment are not engaged in sport activities, we need to identify who and why some persons within this population are engaged in sport. In the process of finding the answer to these questions we have to identify some essential social status indicators of those who are engaged in sport in Serbia. For that purpose, 28 athletes with physical impairment completed a standard questionnaire (constructed by the Republic Institute for Sport in 2000) related to the social status of the top athletes. Results of this questionnaire showed that persons with physical impairment engaged in sport in Serbia are approximately at the age of 35.5 ± 10.17 , they started to practice some sport on their own initiative and the reasons for their engaging in sport are health and personal satisfaction with this kind

of engagement. The Results also indicate that there is no planned engagement of persons with physical impairment in sport, and that participation in sport activities of these persons is mostly the result of their awareness of sport importance for their health as well as their own interests in a certain sport activity, and that these persons mostly belong to the population with lower social status.

Key words: physical impairment, sport activities, age, social status

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Ostvarivanje socijalnih uloga osoba sa cerebralnom paralizom

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Životne navike se sastoje od svakodnevnih aktivnosti i socijalnih uloga koje omogućavaju osobi opstanak i dobrobit u društvu tokom celog života. Veliki broj osoba sa invaliditetom ima problem u ostvarivanju svakodnevnih životnih aktivnosti i participaciji u društvenoj zajednici u skladu sa svojim preostalim sposobnostima. Takva situacija može stvoriti osećaj izolovanosti i izdvojenosti iz društvene zajednice.

Cilj rada je bio proceniti ostvarivanje socijalnih uloga osoba sa cerebralnom paralizom sa fokusom na nivo njihovog ostvarivanja. Uzorak je formiran od 51 osobe sa cerebralnom paralizom oba pola, starosti između 35 i 55 godina. Istraživanje je izvršeno tokom maja 2012. godine u Savezu za cerebralnu i dečiju paralizu Beograda i Savezu za cerebralnu i dečiju paralizu Srbije. Za procenu je korišćena „Skala za procenu životnih navika” (Fougeyrollas et al., 1998) deo koji se odnosi na ostvarivanje socijalnih uloga. Deskriptivne statističke metode, apsolutni i relativni pokazatelji primenjeni su za obradu podataka, a odnos između nezavisnih i zavisnih varijabli je ispitan hi-kvadrat testom.

Rezultati istraživanja pokazuju da u oblasti odgovornosti i međuljudskih odnosa većina ispitanika nema teškoća u ostvarivanju uloga. U sferama život u zajednici, obrazovanje, zaposlenje i rekreacija ispitanici participaciju ostvaruju na različitim nivoima, od ostvarivanja sa poteškoćama do neostvarivanja. Rezultati istraživanja, takođe, pokazuju da se starost i pol ispitanika nisu pokazali kao statistički značajni činioci za nivo ostvarivanja socijalnih uloga. Obrazovanje se pokazalo kao statistički značajna varijabla u oblasti odgovornosti ($X^2=25.835$; $p=0,011$) i međuljudskih odnosa ($X^2=22.788$; $p=0,012$).

Osobe sa cerebralnom paralizom se suočavaju sa poteškoćama u ostvarivanju socijalnih uloga uglavnom u onim oblastima čije ostvarivanje zahteva učešće u životu van kuće. U tom smislu otežavajući i ograničavajući faktori pored postojećeg invaliditeta su fizičke barijere i socio – kulturni stavovi.

Ključne reči: osobe sa cerebralnom paralizom, socijalne uloge, životne navike, socijalna participacija

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Acomplishment of social roles in persons with cerebral palsy

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Life habits include daily activities and social roles that grant a person survival and well-being in society throughout their lives. Many individuals with disabilities have a problem in accomplishing daily activities and participating in the community in accordance with their remaining abilities. This situation can create a sense of isolation and separation from the community.

The aim of this research is to assess the accomplishment of social roles of persons with cerebral palsy, focusing on the accomplishment level. The sample consisted of 51 persons with cerebral palsy of both genders. The participants were aged between 35 and 55. The survey was conducted during May 2012 in Association for Cerebral and Child Paralysis of Belgrade and Association for Cerebral and Child Paralysis of Serbia. Assessment of Life Habits (Fougeyrollas et al., 1998) was used for assessment. Descriptive statistics, absolute and relative indicators were applied for data processing, and the relationship between the independent and dependent variables was examined by chi-square test.

The results show that majority of respondents have no difficulties in the accomplishment of social roles in the

area of responsibility and interpersonal relationships. In the areas of community life, education, employment and recreation, the respondents participate at different levels ranging from „accomplishment with difficulties” to „not performed”. Research results also showed that the age and sex of the respondents were not statistically significant factors for the accomplishment of social roles. Education proved to be a statistically significant variable in the area of responsibility ($X^2=25.835$; $p=0.011$) and interpersonal relationships ($X^2=22.788$; $p=0.012$).

People with cerebral palsy face difficulties in the accomplishment of social roles mostly in those areas whose realization requires participation in the out of home life. For that matter, apart from the existing disability, physical barriers and socio – cultural attitudes are aggravating and limiting factors.

Key words: persons with cerebral palsy, social role, life habits, social participation

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Patološka stanja u gerontosomatopediji u odnosu na periodizaciju starosti

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Starenje je nezustavljiv proces postepenog menjanja strukture organizma. Ovaj proces započinje rođjenjem, a organizam, postepeno, postaje sve stariji. Starenje prate minimalne promene koji na kraju dovođi do smrti. Nauka još uvek nije precizno utvrdila uzroke starenja, kao neminovnog i konačnog procesa. U ovom preglednom radu prikazana su patološka stanja koja se najčešće javljaju u određenim periodima starosti. Početno staračko doba bi trebalo omeđiti dobnom skupinom od 65-75 godine, srednje od 75-85 godina, a kao duboku starost označiti onu iznad 85 godina. Neka istraživanja ukazuju da osobe iznad 65 godina boluju prosečno od četiri bolesti, a to predstavlja značajno opterećenje za ekonomiju. U svim tim dobima nastaju neka karakteristična stanja kao što je to slučaj u neuropsihijatrijskoj patologiji: Parkinsonova bolest, Alchajmerova bolest, moždani udar, promene karaktera, depresija, anksioznost, paranoja, krutost psihe, kognitivne smetnje itd; potom na senzornom planu: presbiopija, katarakta, glaukom, dijabetička retinopatija, presbiakuzis, subsurditis, smanjena funkcija čula ukusa i mirisa; na planu lokomotorike može doći do osteoporoze, preloma kuka, promena na kičmenom stubu i hroničnog reumatoidnog artritisa, a u okviru internističke patologije često se javljaju hronični bronhitis i akutni infarkt miokarda. Gore pomenute bolesti bitno ograničavaju funkcionisanje obolelih,

tj. smanjuju nivo njihove svakodnevne aktivnosti, preostalu radnu sposobnost i povećavaju zavisnost od okruženja. Dalje proučavanje najčešćih bolesti trećeg doba je bitno ne samo radi njihovog lećenja, nego i njihove prevencije.

Ključne reči: somatopedija, gerontosomatopedija, periodizacija starosti

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Pathological conditions in gerontosomatopathology in relation with periods of aging process

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Abstract Aging is an unstoppable process in which organism structure gradually changes. Aging starts with birth and each day an organism becomes older, with minimal changes which eventually lead to death. The process of aging is inevitable and final, and science still hasn't revealed what causes it. In this work we describe pathological conditions which are most common in certain periods of aging. Early old age starts with 65 and ends with 75 years of age, middle old age is from 75 till 85 years of age, while late old age is above the age of 85. Some researches show that persons older than 65 suffer from 4 diseases on average, which is a tremendous economic burden. In all those life periods there are some characteristic medical conditions that appear, as for example in psychiatric and neurological pathology: Parkinson's disease, Alzheimer's disease, stroke, personality changes, depression, anxiety, paranoia, rigidity of the psyche, cognitive disorders; then, sensory disturbances: presbyopia, cataract, glaucoma, diabetic retinopathy, presbiakuzis, suburiditis, decreased function of the senses of taste and smell; on locomotion plan we can expect osteoporosis, hip fractures, changes in the spinal cord and chronic rheumatoid arthritis, and within internist pathology chronic bronchitis and acute myocardial infarct often occur. The above-mentioned diseases significantly limit patients' functioning,

reduce their daily activities, remaining work capacity and increase their depending on the environment. Further study of the most common diseases of the third age is essential not only for their treatment but also their prevention.

*Key words: somatopathology,
gerontosomatopathology, periods of aging process*

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Needs assessment model on assistive technology use for students with cerebral palsy from an inclusive school environment

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Assistive technology is a technology used by individuals with disabilities in order to perform functions that are difficult or impossible for them. Assistive technology unlocks a new world for students in the inclusive process. It gives them the opportunity to access regular school program and be successful in learning.

The individual needs assessment for assistive technology offers great choice of assistive peripherals and services that will bring improved functional abilities of the individual. Open Windows is the only organization in Macedonia which makes assessment, selection, use and introduction and implementation of assistive technology in various spheres in the society, with an emphasis on the inclusive education.

The research aims to gain insights on the impact of the assessment for the selection and use of assistive technology in working with students with cerebral palsy in an inclusive school environment. Quantitative-qualitative approach was used to monitor two cases that matched certain criteria. This is a longitudinal study where techniques of participatory observation, documentation analysis and testing were applied. We used specially developed assessment tests and evaluation form on the needs of assistive technology as research instruments. The

data were analyzed and presented in detail for each individual case, including the environment.

The results of the survey indicate a positive impact of assistive technology on the development of the thinking process, eye hand coordination, motor skills and visual perception. It also confirms the importance of assistive technology as a redundant tool in literacy of these students and for the achievement of higher educational goals.

It can be concluded that the needs assessment model for assistive technology use contains the required parameters for the assessment and selection of assistive technology according to the abilities of the children with cerebral palsy. Assistive technology significantly improves the development of specific skills and supports the educational process.

*Keywords: assessment model, assistive technology,
children with cerebral palsy, inclusive school
environment*

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Karakteristike kvaliteta života osoba sa telesnim invaliditetom¹

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Kvalitet života kod hroničnih stanja / invalidnost/, predstavlja kompleksan parametar za praćenje prilagođavanja invaliditetu, funkcionisanje sa invaliditetom, opšteg blagostanja i zadovoljstva svojim životom, praćenje dostupnosti zdravstvene i socijalne zaštite, u krajnjoj liniji poštovanje ljudskih prava.

Predmet istraživanja je strukturisano proučavanje kvaliteta života osoba sa telesnim invaliditetom u Srbiji.

Cilj istraživanja rada je pružanje opštih znanja o kvalitetu života osoba sa invaliditetom u Srbiji. Odnosno:

1. odrediti karakteristike kvaliteta života kod osoba sa invaliditetom,
2. odrediti stepen zadovoljstva životom kod osoba sa invaliditetom,
3. utvrditi razliku u kvalitetu života i zadovoljstvo životom između osoba sa invaliditetom i zdravih osoba.

Metodologija istraživanja uključuje korišćenje standardnih statističkih metoda. Podaci o kvalitetu života ispitanika dobijeni su anketom. Korišćeni su: Kratak upitnik o kvalitetu života Svetske zdrav-

stvene organizacije i Upitnik o kvalitetu uživanja i zadovoljstva u životu.

U istraživanju je učestvovalo 390 osoba sa telesnim invaliditetom – cerebralna paraliza, multipla skleroza, mišićna distrofija i traumatska paraplegija. Istraživanje ima reprezentativan uzorak, jer su uključene osobe različitog nivoa obrazovanja sa teritorije cele Srbije. Kod osoba sa invaliditetom najočuvaniji domen u kvalitetu života je socijalno funkcionisanje, a najugroženiji je domen okruženja. Među osobama sa invaliditetom nema razlika u oceni kvaliteta života i zadovoljstva svojim životom u odnosu na pol. Osobe sa invaliditetom ocenjuju svoj kvalitet života značajno niže, kao i zadovoljstvo svojim životom, u odnosu na osobe bez invaliditeta. Osobe sa multiplom sklerozom i osobe sa mišićnom distrofijom procenjuju svoje fizičko funkcionisanje vrlo nisko, dok osobe sa paraplegijom i DCO funkcionišu slično osobama bez invaliditeta u domenu fizičko funkcionisanje.

Ključne reči: invalidost, kvalitet života, telesna invalidnost, karakteristike

1 Rad je proistekao iz projekta „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“, broj 179025 (2011-2014), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

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Quality of life in persons with physical disabilities¹

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Quality of life in chronic conditions / disability /, is a complex parameter in adjusting to disability, functioning with disabilities, general welfare and life satisfaction, monitoring the availability of health and social care, and ultimately human rights.

The subject of this research is the study of the structured quality of life in people with physical disabilities in Serbia.

The goal of this research is to provide general knowledge about the quality of life of people with disabilities in Serbia. That is:

1. to determine the characteristics of the quality of life in people with disabilities
2. to determine the level of life satisfaction among persons with disabilities,
3. to determine the difference in the quality of life and life satisfaction among persons with disabilities and healthy individuals.

Research methodology includes the use of standard statistical methods. Data on the quality of life were obtained by means of a survey., A short questionnaire

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on the quality of life of the World Health Organization and the questionnaire about the quality of enjoyment and satisfaction in life were used.

The study included 390 people with physical disabilities – cerebral palsy, multiple sclerosis, muscular dystrophy and traumatic paraplegia. The survey includes a representative sample, because people with different levels of education from all over Serbia were involved. Social functioning is the most preserved domain of the quality of life in people with disabilities, while the most endangered is the environmental domain. There is no difference in the assessment of the quality of life and life satisfaction in relation to sex among persons with disabilities. People with disabilities consider their quality of life and satisfaction with their lives to be significantly lower, compared to people without disabilities. People with multiple sclerosis and people with muscular dystrophy assess their physical functioning as very low, while persons with paraplegia and DCO function similarly to non-disabled persons in the area of physical functioning.

Keywords: disability, quality of life, physical disability, characteristic

1 This paper results from the project „Developing a protocol for the assessment of educational potentials in children with disabilities as a criterion for the development of individual education programs” nr. 179025 (2011-2014), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

Uticaj efekata integralne i integrativne rehabilitacije dece sa višestrukim razvojnim poremećajima na kvalitet života porodice

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Značajan broj studija o kvalitetu života u vezi sa zdravljem, pored ispitivanja kvaliteta života pacijentata u prvi plan stavlja i kvalitet života osoba koje im pružaju negu i zaštitu. Cilj rada je procena uticaja efekata integralnog i integrativnog defektološkog tretmana dece sa višestrukim razvojnim poremećajima na kvalitet života njihovih roditelja.

Istraživanje je po tipu prospektivne longitudinalne studije. U trajanju od jedne godine istraživane su promene u vremenu koje su nastale u toku kontinuiranog, integralnog i integrativnog rehabilitacionog defektološkog tretmana dece sa višestrukim razvojnim poremećajima i kvaliteta života njihovih roditelja. Ponovljena merenja vrednosti varijabli od interesa, vršena su u intervalima od po četiri meseca. Ispitivani uzorak čini jedna eksperimentalna grupa od trideset porodica koje imaju dete (decu) sa višestrukim razvojnim poremećajima. Sva deca su uzrasne dobi do tri godine, muškog i ženskog pola. Instrument merenja sastojao se od demografskih podataka, protokola za procenu psihomotornog statusa dece, skale Brunet-Lezine i upitnika za procenu kvaliteta života SF 36. Za statističku analizu po-

dataka korišćene su metode deskriptivne analize, a u okviru inferencijalne statistike: χ^2 test, t-test i MannWhitney U test i analiza varijansnog količnika za ponovljena merenja, na nivou značajnosti od 0,05 korišćenjem statističkog paketa SPSS 15.

Razvojni koeficijent dece i njegove komponente imale su statistički značajna povećanja iz merenja u merenje, a kašnjenje naših ispitanika u odnosu na kalendarski uzrast je statistički značajno smanjeno. Promene nastale na nivou razvojnih smetnji u odnosu na neurofiziološke preduslove statistički su značajne, a uglavnom su se dešavale između prvog i drugog merenja. Dobijene prosečne vrednosti osam dimenzija zdravlja roditelja naših ispitanika pri prvom merenju, u poređenju sa američkom opštom populacijom, ukazuju na smanjenje vrednosti kada je u pitanju vitalnost, socijalno funkcionisanje i uloga emocija. U toku istraživanja konstatovali smo statistički značajno povećanje upravo u ove tri dimenzije zdravlja koje su se desile uglavnom između prvog i drugog merenja.

Ključne reči: deca sa višestrukim razvojnim poremećajima, integralna i integrativna rehabilitacija, kvalitet života, kvalitet života negovatelja

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The effect of integral and integrative rehabilitation of children with multiple developmental disorders on family quality of life

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Apart from evaluating patient's quality of life, a significant number of health-related quality of life studies emphasize the quality of life of caregivers. The aim of this paper was to evaluate the effect of integral and integrative special education treatment of children with multiple developmental disorders on their parents' quality of life.

The research was designed as a prospective longitudinal study. During the period of one year, we evaluated changes in time that occurred during the continuous, integral and integrative rehabilitation treatment and special education of children with multiple developmental disorders and their parents' quality of life. The repeated measurements of variables of interest were performed at intervals of 4 months. The study sample included a single experimental group of 30 families with child/children with multiple developmental disorders. The children were boys and girls up to 3 years of age. The measurement instruments included demographics, protocol for assessment of psychomotor status in children, Brunet-Lezine scale, and the Short Form (SF) 36 Health Survey. Descriptive statistical analysis

was used to evaluate the data, as well as the following methods of inferential statistics: χ^2 test, t-test, and Mann-Whitney U test and repeated measures analysis of variance, at the significance level of 0.05, using SPSS 15 statistics software package.

Children's developmental index and its components showed a significant increase at each subsequent measurement, and the developmental delay with regard to age significantly decreased in our subjects. Changes that occurred at the level of developmental disorders compared to neurophysiological requirements were statistically significant, and they mostly occurred between the first and the second measurement. The obtained average values of eight dimensions of our patients' parents health indicate the decreased values for vitality, social functioning and emotional role, compared to general American population. During the research, we found a significant increase in these three health dimensions that occurred mostly between the first and the second measurement.

Key words: children with multiple developmental disorders, integral and integrative rehabilitation, quality of life, caregiver's quality of life

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Uticaj okruženja na percepciju socio-emocionalnih odnosa odraslih osoba sa umerenom intelektualnom ometenošću¹

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Osobe sa intelektualnom ometenošću (IO) imaju izražene teškoće u uspostavljanju i održavanju prijateljskih odnosa. Socijalnu mrežu ovih osoba najčešće čine članovi porodice ili druge osobe sa IO koje koriste iste servise podrške.

Osobe sa IO koje žive u zajednici, iako su u prilici da uspostave prijateljske odnose sa osobama tipične populacije, imaju manje razvijenu socijalnu mrežu, od korisnika institucionalnog smeštaja. Život u domu za osobe sa IO omogućava stalni kontakt i formiranje bliskih veza sa većim brojem osoba koji funkcionišu na istom ili sličnom intelektualnom nivou.

Cilj ovog istraživanja bio je utvrđivanje uticaja socijalnog okruženja na stavove odraslih osoba sa IO vezane za ispoljavanje emocija u socijalnim kontaktima sa vršnjacima i profesionalcima koji su angažovani na pružanju podrške.

Uzorkom je obuhvaćeno 128 ispitanika sa umerenom IO, uzrasta od 18 do 59 godina (AS=33,36, SD=8,71), podeljenih prema tipu stanovanja u tri grupe: osobe sa IO koje žive u primarnoj porodici (N=52, 40,9%), u instituciji (N=55, 43,4%) i u društvenoj zajednici uz podršku (N=20, 15,7%).

Za ispitivanje stavova o ispoljavanju i interpretaciji emocija drugih (ljubav, ljutnja, tuga) u formalnim i prijateljskim odnosima upotrebjeno je 11 ajtema iz

upitnika za ispitivanje slike o sebi. Četiri ajtema se odnose na emocije koje se javljaju u interakcijama sa specijalnim edukatorima, a sedam na emocije koje su prisutne u prijateljskim odnosima sa vršnjacima.

Na osnovu rezultata χ^2 testa na pojedinačnim ajtemima može se zaključiti da na ispitanom uzorku tip stanovanja ne utiče značajno na način ispoljavanja, kao ni percipiranja emocija drugih osoba bilo da se radi o profesionalnom ili prijateljskom odnosu ($p>0.05$).

Ključne reči: socijalno okruženje, umerena intelektualna ometenost, socioemocionalni odnosi

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1 Rad je proistekao iz projekta „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“, broj 179025 (2011-2014), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

Influence of environment on perception of socio-emotional relationships of persons with moderate intellectual disability¹

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Persons with intellectual disability (ID) experience difficulties in making and maintaining friends. These individuals' social network consists of their family members or other people with ID who use the same support services.

People with ID who live in the community have less developed social network than those who live in institutions, although they are in the position to make friends with people from typical population. For people with ID, life in an institution provides constant contact and possibility to form close relationships with larger number of people functioning at the same or similar intellectual level.

The aim of this research was to determine the influence of social environment on attitudes of adults with ID related to expression of emotions in social contacts with peers and professionals engaged in providing support.

The sample included 128 participants with moderate ID, aged 18 to 59 (AM=33.36, SD=8.71), divided in three groups according to the accommodation type: persons with ID living in their primary family (N=52, 40,9%), in an institution (N=55, 43,4%) and in the social community with support (N 20, 15,7%).

Eleven items from the questionnaire for assessing self-representation were used to investigate attitudes on

expression of one's own and interpretation of other persons' emotions such as love, anger or sadness in formal and friendly relationships. Four items are related to emotions which appear in interaction with special educators and seven to emotions present in friendly interactions with peers.

Based on the results of χ^2 test (single item analysis), we could conclude that in the investigated sample, the type of accommodation does not significantly influence either the way of expressing one's own emotions or the perception of other people's emotions in both professional and friendly relationships ($p>0.05$).

Key words: social environment, moderate intellectual disability, socio-emotional relationships

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¹ This paper results from the project „Developing a protocol for the assessment of educational potentials in children with disabilities as a criterion for the development of individual education programs” nr. 179025 (2011-2014), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

*Modeli podrške odraslim osobama sa smetnjama i
poremećajima u razvoju*

Support models for people with disabilities

Osiguranje jednakih mogućnosti za studente sa posebnim potrebama u visokom obrazovanju u Bosni i Hercegovini

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Istraživanje polazi od pretpostavke da prepoznavanje i priznavanje određenih prava studentima sa posebnim potrebama u visokom obrazovanju nije sistemski organizirano niti riješeno u Bosni i Hercegovini. Osnovni cilj istraživanja je bio da se analizira postojeća zakonska legislativa vezana za visoko obrazovanje studenata s posebnim potrebama i da se ispitaju stavovi menadžmenta javnih univerziteta prema osiguranju jednakih mogućnosti za studente sa posebnim potrebama u visokom obrazovanju. Istraživanje je provedeno 2012. godine u okviru Tempus projekta „Jednake mogućnosti za studente sa posebnim potrebama u visokom obrazovanju”. Podaci vezani za zakonsku legislativu i trenutno stanje obrazovanja studenata sa posebnim potrebama u visokom obrazovanju prikupljeni su na osnovu Upitnika za analizu postojeće politike i prakse koji je kreiran za potrebe ovog istraživanja. Rezultati su dobiveni putem intervjua sa savjetnicima 13 resornih ministarstava i menadžmentom 8 javnih univerziteta. Rezultati istraživanja su obrađeni kvalitativno. Analizom dobivenih podataka uočen je nedostatak zakonskih i podzakonskih akata o jednakim mogućnostima u visokom obrazovanju, te je uočen nedostatak mehanizama identifikacije i podrške studentima sa posebnim potrebama u vi-

sokom obrazovanju. Rezultati ukazuju na nužnost osiguranja institucionalnih mehanizama osiguranja jednakih mogućnosti u visokom obrazovanju i kreiranja Pravilnika za podršku studentima sa posebnim potrebama u visokom obrazovanju u BiH.

Ključne riječi: posebne potrebe, visoko obrazovanje, jednake mogućnosti

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Providing equal opportunities for students with special needs in higher education in Bosnia and Herzegovina

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laws for supporting students with special needs in Higher Education in BH.

Key words: special needs, higher education, equality in education

Starting point of this research is the assumption that admission and recognition of certain rights of students with special needs in Higher Education is not systematically organized or managed in Bosnia and Herzegovina. The main goal of this research was to analyze the existing legislation regarding Higher Education for students with special needs, and to investigate management attitudes at public Universities toward students with special needs. The research was conducted in 2012 as a part of the Tempus project „Equal Opportunities for Students With Special Needs in Higher Education”. Data regarding law regulations and current state of education of students with special needs in Higher Education were collected by means of a Questionnaire for analysis of the existing policy and practice, specially designed for this research. The results were obtained by interviewing councilors of 13 resource ministries and management of 8 public Universities. The results were analyzed qualitatively. The analysis of the collected data points to the deficit of law regulations of equal opportunities in higher education, as well as means of identification and support for students with special needs. The results show that institutional mechanisms for providing equal opportunities must be developed, as well as a set of rules and by-

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Vršnjačka potpora studentima s invaliditetom u visokom obrazovanju: Iskustva studenata

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Cilj rada je prikazati rezultate evaluacije procesa i učinka predmeta VPSSI – Vršnjačka potpora studentima s invaliditetom (dvije godine izvođenja predmeta). Predmet je razvijen kao jedna od aktivnosti unutar Tempus projekta Education for Equal Opportunities at Croatian Universities – EduQuality (www.eduquality-hr.com). Cilj kolegija je educirati i senzibilizirati studente-asistente koji će, pružajući osnove vršnjačke potpore, kreirati takve uvijete za studente s invaliditetom kojima se može prevladati čitav niz prepreka koje organizacijski i objektivno egzistiraju u akademskom okruženju. Evaluacijom su dobiveni podaci o relevantnosti sadržaja kolegija te načinima i kvaliteti izvođenja predmeta kao i podaci o postignutim ishodima učenja te drugim dobitima za studente-asistente nakon položenog predmeta. Metode prikupljanja podataka su bile: skala procjene, anketa za studente s pitanjima otvorenog tipa te fokus grupe. Sudionici istraživanja bili su studenti-asistenti (N=22) i studenti s invaliditetom (N=22). Rezultati evaluacije govore u prilog korisnosti i uspješnosti kolegija u području senzibiliziranosti za studente s invaliditetom, osposoblje-

nosti za pružanje vršnjačke potpore, spremnosti i sigurnosti u zagovaranju prava studenata s invaliditetom, snalaženja i promišljanja etičkih pitanja u odnosu vršnjačke potpore u akademskom i širem socijalnom okruženju i drugo. Rezultati upućuju na zaključak kako je ovakav način osiguravanja izjednačenih mogućnosti za studente s invaliditetom u sustavu visokog obrazovanja učinkovit.

Ključne riječi: studenti s invaliditetom, jednake mogućnosti, sveučilišni predmet, visokoškolsko obrazovanje

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Peer support to students with disabilities in higher education: Students' experience

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providing peer support in an academic and social context. It can be concluded that the course provides a useful and sustainable platform for equating opportunities for students with disabilities in higher education.

Key words: students with disabilities, equal opportunities, university course, higher education

The goal of this paper is to present the results of evaluation process of the PSSwD course (two years of implementation). Peer support for students with disabilities course (PSSwD) was developed and carried out as one of the activities of the Tempus project: Education for Equal Opportunities at Croatian Universities – EduQuality (www.eduquality-hr.com). The aim of the course was to enable students to offer peer support to students with disabilities in an academic setting. Valuable information was obtained by means of evaluation, about the relevance of content, and means and quality of course implementation, and about the achieved learning outcomes and additional benefits that students - assistants gained through the course. The following methods were used in evaluation: self-report scales, open-ended questionnaire, and focus groups. Student assistants (N=22) and students with disabilities (N=22) participated in the evaluation process. The results showed effectiveness of the course, especially regarding the increased sensitivity for students with disabilities, the provision of peer support, readiness and confidence in advocating for students with disabilities, and recognizing ethical challenges in

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Uticaj govorne percepcije na sposobnost komunikacije odraslih prelingvalno gluvih osoba nakon kohlearne implantacije¹

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Cilj rada je da se utvrdi da li govorna percepcije utiče na kvalitet komunikacije kod prelingvalno gluvih odraslih osoba nakon kohlearne implantacije, s obzirom da mnoga istraživanja ukazuju da nema značajnog poboljšanja u govornoj percepciji, pa samim tim i u komunikaciji kod odraslih, koji su kongenitalno gluvi

Uzorkom je obuhvaćeno 66 ispitanika oba pola, uzrasta od 18 do 53 godine sa prelingvalnim oštećenjem sluha od preko 90dB, prosečnih intelektualnih sposobnosti. Svi ispitanici su bili približno istog obrazovnog nivoa.

Govorna percepcija je ispitivana primenom testova: a) Test minimalne percepcije reči CNC (Consonant Nucleus Consonant Test Battery for Adult Cochlear Implant Users CD; Nilsson et al., 1996); b) Test prostih rečenica (CID) (Central Institute for the Deaf Sentences; v) Test prostih rečenica u tišini (T) i u bučnom okruženju (B) (Hearing in Noise/Quiet Test (HINT) sentence; Nilsson et al., 1996).

Sposobnost komunikacije je proveravana na osnovu odgovora na tvrdnje/pitanja: čujem bolje kada razgovaram u dvoje, i dalje zavisim od čitanja sa usana, i dalje komuniciram gestom, neophodno je da pišem da bi me razumeli, mogu da razgovaram telefonom sa poznatima, mogu da razgovaram telefonom sa nepoznatima i poređenjem čujnosti sa slušnim apa-

ratom pre implantacije i čujnosti sa implantom. Uпитnik je podrazumevao sledeće ponuđene odgovore: a) uvek, b) često, v) ponekad, g) retko i d) nikad.

Dobijeni rezultati pokazuju da komunikacija statistički značajno zvisi od govorne percepcije i da su žene komunikativnije od muškaraca, bez obzira na kvalitet govorne percepcije.

Ključne reči: kohlearna implantacija, govorna percepcija, komunikacija, prelingvalna gluvoća, odrasle gluve osobe.

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1 Rad je proistekao iz projekta „Kreiranje protokola za procenu edukativnih potencijala dece sa smetnjama u razvoju kao kriterijuma za izradu individualnih obrazovnih programa“, broj 179025 (2011-2014), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije

Influence of speech perception on communication ability in prelingually deaf adults after cochlear implantation¹

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The aim of this study was to determine whether speech perception affects the communication quality of prelingually deaf adults after cochlear implantation, as many surveys indicate that there is no significant improvement in speech perception, and therefore in communication with adults who are congenitally deaf.

The sample included 66 patients of both sexes, aged 18 to 53 with prelingual hearing loss of more than 90dB, and with average intellectual abilities. All subjects were of comparable educational level.

Speech perception was tested using the test: a) Test of minimum words perception CNC (Consonant Nucleus Consonant Test Battery for Adult Cochlear Implant Users CD; Nilsson et al., 1996) b) Test of simple sentences (CID) (Central Institute for the Deaf Sentences c) Test of simple sentences in silence (T) and in noisy environments (B) (Hearing in Noise / Quiet Test (HINT) sentences; Nilsson et al., 1996).

Communication skills were evaluated with regard to responses to the claims/questions: I hear better when I talk to two, I still depend on lip-reading, and I still communicate with gestures, it is necessary to write to understand me, I can talk on the phone with the known person, I can talk on the phone with strangers, and a comparison of hearing with hearing aids before implantation and hearing with the

implant. The questionnaire included the following answers: a) always b) often c) sometimes d) rarely d) never.

The results show that communication significantly depends on the speech perception and that women are more communicative than men, regardless of the quality of speech perception.

Keywords: cochlear implants, speech perception, communication, prelingual deafness, deaf adults

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1 This paper results from the project „Developing a protocol for the assessment of educational potentials in children with disabilities as a criterion for the development of individual education programs” nr. 179025 (2011-2014), financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

Nanotehnologije u funkciji zaštite vida

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Da li je svetlost fototoksična i da li može da nanese „štetu“ našem oku? Brojna su istraživanja koja potkrepljuju tvrdnju da svetlost ima toksični potencijal i da može izazvati degenerativne promene i povrede, naročito mrežnjače, ali i ostalih tkiva oka. Kao razlog navodi se upravo apsorpcija fotona različitih talasnih dužina, kako u rožnjači i sočivu (UV-ultraljubičasto zračenje), tako i u retinalnom pigmentnom epitelu (delovi vidljivog spektra). Tri su osnovna mehanizma kojima svetlost može da ošteti oko: fototermalni, fotomehanički i fotohemijski.

U okviru projekta "Funkcionalizacija nanomaterijala za dobijanje nove vrste kontaktnih sočiva i ranu detekciju dijabetesa", na modulu za Biomedicinsko inženjerstvo Mašinskog fakulteta Univerziteta u Beogradu, formiran je radni tim koji je realizovao početna istraživanja i razvoj gaspropusnih nanofotonskih kontaktnih sočiva na bazi silikon-akrilata i nanočestica-fulerena.

Cilj istraživanja je bio da se, uključivanjem fullerena u matricu standardnog polimera, razvije novi materijal za proizvodnju gaspropusnih kontaktnih sočiva (RGP), koji bi poboljšao njegova optička svojstva pri transmisiji vidljive i „skoro vidljive“ svetlosti, povećao osetljivost na kontrast i percepciju boja, umanjio propustljivost UV i bliskog-UV spektra pa

samim tim i fototoksične efekte svetlosti. Postupkom polimerizacije, u saradnji sa italijanskom kompanijom SOLEKO™, proizvedeni su prvi nanofotonski materijali za RGP kontaktna sočiva.

Rezultati su pokazali da novodobijeni nanofotonski materijali blokiraju značajno više UV, ljubičaste i plave svetlosti nego što je to slučaj kod konvencionalnih RGP materijala i da se kao takvi mogu koristiti za proizvodnju optičkih pomagala (sočiva za naočare, kontaktna sočiva, intraokularna sočiva i dr.) koja bi štitila strukturu oka od degenerativnih promena (degeneracija makule, pterigijum, katarakta i dr.)

Ključne reči: nanotehnologije, fulereni, kontaktna sočiva, zaštita vida, degenerativne promene oka

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Using nanotechnologies in eye/vision protection

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How toxic is light for a human eye? The results of many researches confirm that light can have acute (photo-trauma) and chronically (degeneration) toxic potential on all parts of the human eye, especially the retina. The reason for this is absorption of light photons of different wavelength by eye tissues: cornea, crystalline lens (UV light), retinal pigment epithelium (visible light). There are three different mechanisms of light's harmful effect on the eye: photo-thermal, photo-mechanical and photo-chemical.

A team of researchers from the Faculty for Mechanical Engineering at the University of Belgrade, department for Biomedical Engineering is working within the project „Functionalization of nanomaterials for obtaining new types of contact lenses, and early detection of diabetes” on developing nano-photonic rigid gas-permeable (RGP) contact lenses which are based on fullerene incorporated silicone-acrylic.

The aim of the research was to develop new material for RGP contact lens manufacturing that will contain fullerene within its polymer matrix with the goal to improve optical properties of the material in transmitting visible and almost visible light (in that way increasing contrast and color sensitivity) and UV light blocking (prevention of photo-toxic effect).

The first nano-photonic material for RGP contact lenses was polymerized in SOLEKO, Italy.

The results of the research have shown that compared to conventional RGP material, new nano-photonic material has increased UV, violet and blue light blocking properties, and therefore can be a viable option as a material for producing medical optical devices (medical, contact and intra-ocular lenses) with potential benefit in preventing age related macular degeneration, cataract and keratitis.

Key words: nanotechnology, fullerenes, RGP contact lenses, degeneration of the eye

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Preduzeće za profesionalnu rehabilitaciju i zapošljavanje osoba sa invaliditetom, „Kosmos” d.o.o. Beograd

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U ovom saopštenju biće izloženi rezultati rada nakon završenih obuka osoba sa invaliditetom u Preduzeću za profesionalnu rehabilitaciju i zapošljavanje osoba sa invaliditetom „Kosmos” d.o.o. u Beograd.

Pored zapošljavanja osoba sa invaliditetom, Preduzeće izvodi obuke za zanimanja iz oblasti rada kojima se bavi (obuku za knjigovesca, pomoćnika knjigovesca, pakera, kao i osnovnu informatičku obuku). Cilj obuka je zapošljavanje, osamostaljivanje i socijalno uključivanje, a samim tim i poboljšanje uslova i kvaliteta života osoba sa invaliditetom kao i članova njihovih porodica, jer postaju aktivni članovi potrošačkog društva. Polaznici tokom obuke stiču radne i socijalne veštine bitne za zapošljavanje, koje predstavljaju pokretač društvenog aktiviranja i dizanja svesti o sopstvenim mogućnostima. Ipak, obuke su smislenije ukoliko se nakon nje osobe sa invaliditetom radno angažuju i ostanu uključene u radnu sredinu. U suprotnom, povratak na status nezaposlene osobe umanjice efekat obuke, a vremenom dovesti i do zaboravljanja naučenog. Preduzeće „Kosmos” d.o.o. Beograd do sada je realizovalo obuku za 40 polaznika, nakon čega je radno angažovano osam (20%).

U radu ćemo prikazati ostvareni ishod obuke, proceduru zapošljavanja, funkcionisanje osoba sa invaliditetom na radnom mestu (primenu stečenih

radnih i socijalnih veština, zalaganje, napredovanje u radu i sl.), kao i značaj dobre komunikacije sa ostalim zaposlenima za ostvarivanje kvalitetne interakcije, socijalizacije i integracije u novom radnom ambijentu.

*Ključne reči: osobe sa invaliditetom, obuke,
zapošljavanje*

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The importance of vocational training program for persons with disabilities

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This report states the results of the completed training program for persons with disabilities within the Enterprise for professional rehabilitation and employment of persons with disabilities „Kosmos” Belgrade.

Apart from employing persons with disabilities, the Enterprise conducts professional training programs within its professional work field (training programs for bookbinders, assistant bookbinders, packers, as well as the basic IT training). The objective of the training programs is to facilitate employment, self-sufficiency, social inclusion, and consequently, improvement of conditions and quality of life for persons with disabilities, as well as for their family members, providing them with a chance to become active members of the consumer society. Throughout the training programs, the trainees are to acquire working and social skills relevant for employment which trigger social activities and raise awareness on personal potential. However, training programs make more sense if persons with disabilities start working and stay involved in the working environment upon completing the training. Otherwise, shifting back to the status of unemployment would reduce the effects of the training program and, in time, persons with disabilities would forget what they had learned. The Enterprise „Kosmos” has provided a training program for 40 individuals so far, after which 8 participants

were employed (20%). This paper presents the accomplished training results, the employment procedure, the functioning of persons with disabilities in the working environment (application of acquired work and social skills, devotion, work progress, etc.), as well as the significance of good communication with other employees in order to accomplish high-quality interaction, socialization and integration in the new working environment.

Key words: persons with disabilities, training program, employment

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Nivo znanja o seksualnosti kod odraslih osoba sa umerenom intelektualnom ometenošću¹

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Rezultati različitih istraživačkih studija ukazuju na to da osobe sa intelektualnom ometenošću imaju nizak nivo znanja o seksualnosti, kao i da nivo znanja može korelirati sa težinom intelektualne ometenosti, polom i karakteristikama okruženja u kom osoba egzistira. Cilj je utvrđivanje područja u kojima osobe sa umerenom intelektualnom ometenošću imaju najviši i najniži nivo znanja i informisanosti u oblasti seksualnosti, kao i ispitivanje razlika u pogledu znanja o seksualnosti prema polu i obliku stanovanja. Uzorkom su obuhvaćene osobe sa umerenom intelektualnom ometenošću, oba pola (45 muškaraca i 38 žena), uzrasta od 18 do 55 godina. Uzorak je podeljen, u odnosu na oblik stanovanja, na dve grupe ispitanika – grupu koja živi u porodičnom smeštaju (n=30) i grupu koja živi u instituciji (n=53). Nivo znanja o seksualnosti ispitan je primenom modifikovane verzije Strukturiranog intervjua za procenu znanja i stavova o polnosti, koja sadrži 15 pitanja kojima su predstavljene realne životne situacije. Svakom pitanju pridružena je slika koja eksplicitno predstavlja njegov sadržaj. Podaci su analizirani primenom deskriptivne statistike, kao i neparametarskih statističkih tehnika (Man-Vitnijevog U testa i Spirmanove korelacije ranga). Analizom frekven-

cija tačnih i netačnih odgovora uočene su relativne snage u znanju ispitanika u oblasti identifikovanja primerenog načina reagovanja u situaciji neželjenog telesnog i verbalnog kontakta, kao i slabosti u domenu identifikovanja razloga nastanka trudnoće. Ispitanici koji žive sa svojom porodicom bili su značajno bolji u identifikovanju delova tela na slici muškarca (U=489,500, p=0,003) i žene (U=546,000, p=0,014) u odnosu na institucionalno zbrinute ispitanike. Nisu zabeležene statistički značajne razlike u znanjima o seksualnosti u odnosu na pol ispitanika (U=811,500, p=0,69), niti je utvrđena statistički značajna korelacija između nivoa znanja i uzrasta ispitanika ($\rho=0,139$, $p=0,209$). Generalno, odrasle osobe sa umerenom intelektualnom ometenošću obuhvaćene ovim istraživanjem, bez obzira na njihov tip smeštaja, pol ili uzrast, pokazuju relativno sličan nivo znanja o različitim temama u vezi sa seksualnošću. Međutim, nalazi se moraju razmatrati s oprezom s obzirom na to da je korišćen prigodan i relativno mali uzorak. Rezultati ovog istraživanja mogu biti od značaja za koncipiranje programa seksualne edukacije za osobe sa umerenom intelektualnom ometenošću, ali i osnov za dalja istraživanja u ovoj oblasti.

Ključne reči: intervju, polnost, umerena intelektualna ometenost

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1 Apstrakt predstavlja rezultat rada na projektu „Socijalna participacija osoba sa intelektualnom ometenošću“, broj 179017 (2011-2014), čiju realizaciju finansira Ministarstvo prosvete, nauke i tehnološkog razvoja Republike Srbije.

The level of knowledge about sexuality in adults with moderate intellectual disability¹

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The results of various research studies indicate that people with intellectual disability have a low level of knowledge about sexuality and that the level of knowledge can correlate with the severity of intellectual disability, gender and characteristics of living environment. The goal is to determine areas in which people with moderate intellectual disability have the highest and the lowest levels of knowledge and information in the field of sexuality, as well as to examine the differences in knowledge about sexuality according to the respondents' gender and housing type. The sample included people with moderate intellectual disability, of both genders (45 men, 38 women), aged 18 to 55. The sample was divided according to housing type in two groups – a group living in a family home (n=30) and a group living in an institution (n=53). The level of knowledge about sexuality was examined by the use of modified version of the Structured interview for assessment of knowledge and attitudes about sexuality, which consists of 15 questions in which real life situations were presented. Each question was associated with a picture that explicitly represents its content. Data were analyzed using the descriptive statistic and non-parametric

statistical techniques (Mann-Whitney U test and Spearman rank correlation). Through analysis of the frequency of correct and incorrect responses, relative strengths were detected in the knowledge of respondents in identifying the right way to react to a situation of unwanted physical and verbal contact, as well as weaknesses in the area of identifying reasons for occurrence of pregnancy. Respondents living with their families were significantly better at identifying body parts in the pictures of men (U=489,500, p=0,003) and women (U=546,000, p=0,014), compared to the respondents living in institutions. There were no statistically significant differences in knowledge about sexuality in relation to the respondents' gender (U=811,500, p=0,69), and also no statistically significant correlations between the level of knowledge and age of the respondents ($\rho=0,139$, p=0,209). In general, adults with moderate intellectual disability in this research, regardless of the housing type, gender or age, show a relatively similar level of knowledge about different topics related to sexuality. However, the findings must be considered with caution, due to the fact that the sample was convenient and relatively small. Results of this study may be important for designing the programs of sex education for people with moderate intellectual disability and also as the basis for further research in this area.

Key words: interview, sexuality, moderate intellectual disability

1 This abstract results from the project „Social Participation of Persons with Intellectual Disability” financed by the Ministry of Education, Science and Technological Development Republic of Serbia (No. 179017).

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CIP - Каталогизација у публикацији
Народна библиотека Србије, Београд

376.1-056.26/.36-053.2(082)

316.624(082)

376.1-053.26/.36(082)

МЕЂУНАРОДНИ научни скуп Специјална едукација
и рехабилитација данас (7 ; 2013 ; Београд)
Zbornik rezimea = Abstract book / VII
међународни научни скуп Специјална едукација
и рехабилитација данас, Београд, 27 - 29.
septembar 2013. = #The #Seventh International
Scientific Conference Special Education and
Rehabilitation Today, Belgrade, September, 17
- 29, 2013. ; [glavni i odgovorni urednik ;
editor-in-chief Mile Vuković]. - Београд :
Fakultet za specijalnu edukaciju i
rehabilitaciju = Belgrade = Faculty of
Special Education and Rehabilitation, 2013
(Београд : Planet print). - 158 str. ; 24 cm

Radovi na srp., hrv. i engl. jeziku. - Tiraž
250. - Napomene i bibliografske reference uz
tekst.

ISBN 978-86-6203-032-0

a) Деца са посебним потребама - Апстракти
b) Поремећаји понашања - Апстракти c)
Особе са сметњама у развоју - Апстракти

COBISS.SR-ID 201163020